DRUG & COSMETIC INDUSTRY

MAY, 1951

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FRANCIS CHILSON, Production Consultant
MILTON A. LESSER, Technical Editor
HARRY G. KELBLY, Raw Material Editor
FRANK CHILD III, News Editor
MAX FRANKEL, Art Director

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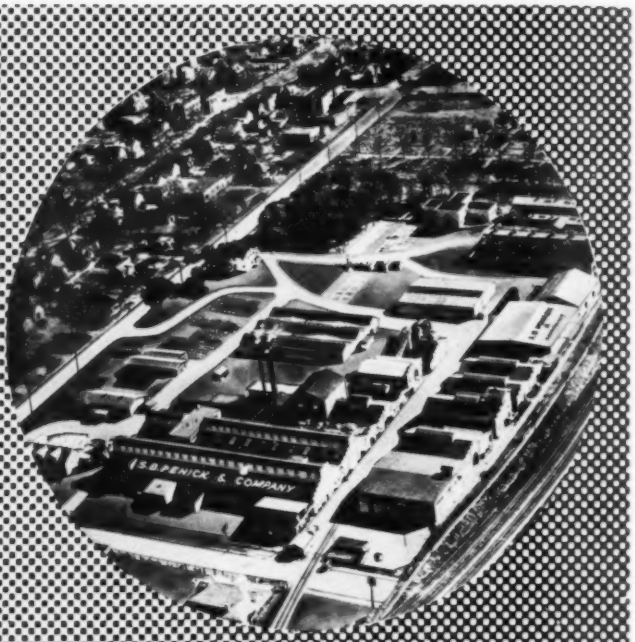

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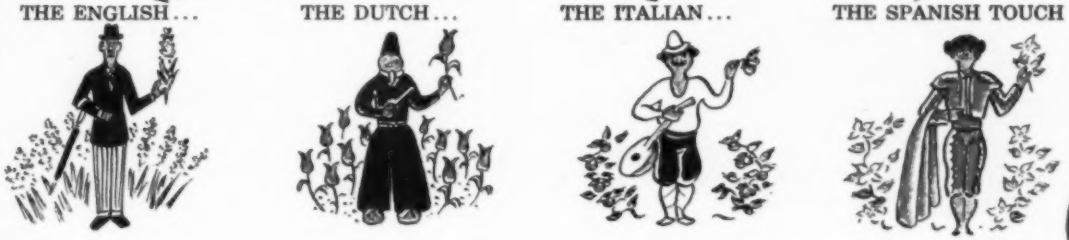

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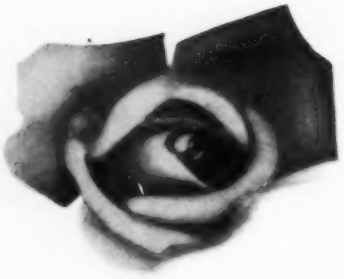

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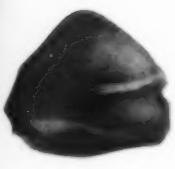

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FOR SPORTSMEN ONLY···

Which of these game fish can you identify?

1 *Generally considered a peppier fighter than its big brother, this species was recently introduced in Florida where it sometimes tops the 15-pound mark!*

2 *A worthy game fish that often reaches 25 pounds; its white flaky flesh makes it popular on the table.*

3 *One of the "fightenest" of fighters, often jumping clear out of the water after the fly, then leaping repeatedly when hooked!*

4 *Known as the fresh-water barracuda, these monsters of our inland lakes run to ninety pounds or more!*

See next column for answers.

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Finding increasing use as a substitute for glycerine as a humectant, this quality chemical is produced in three grades to meet varying industrial requirements. The N. F. Crystal and Technical Crystal, assaying 99% CH_3COOK, are shipped in 100 and 300-pound fiber drums, while the 60% Solution Technical is available in 13-gallon carboys and tank cars.

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Extensive production and research facilities place Baker & Adamson in a preferred position to work with you in development of other BF_3 derivatives or complexes to meet individual specifications.

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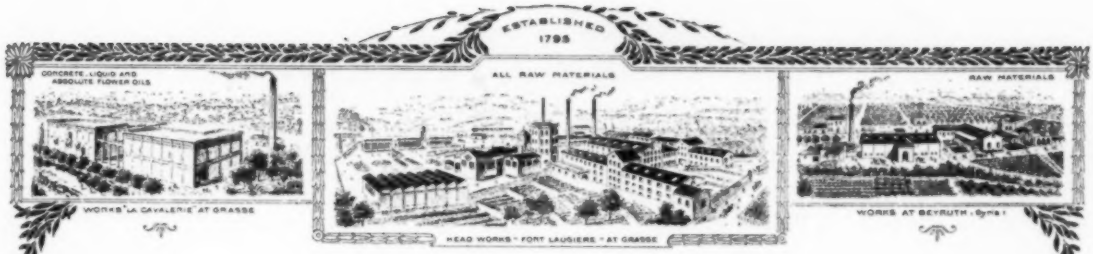
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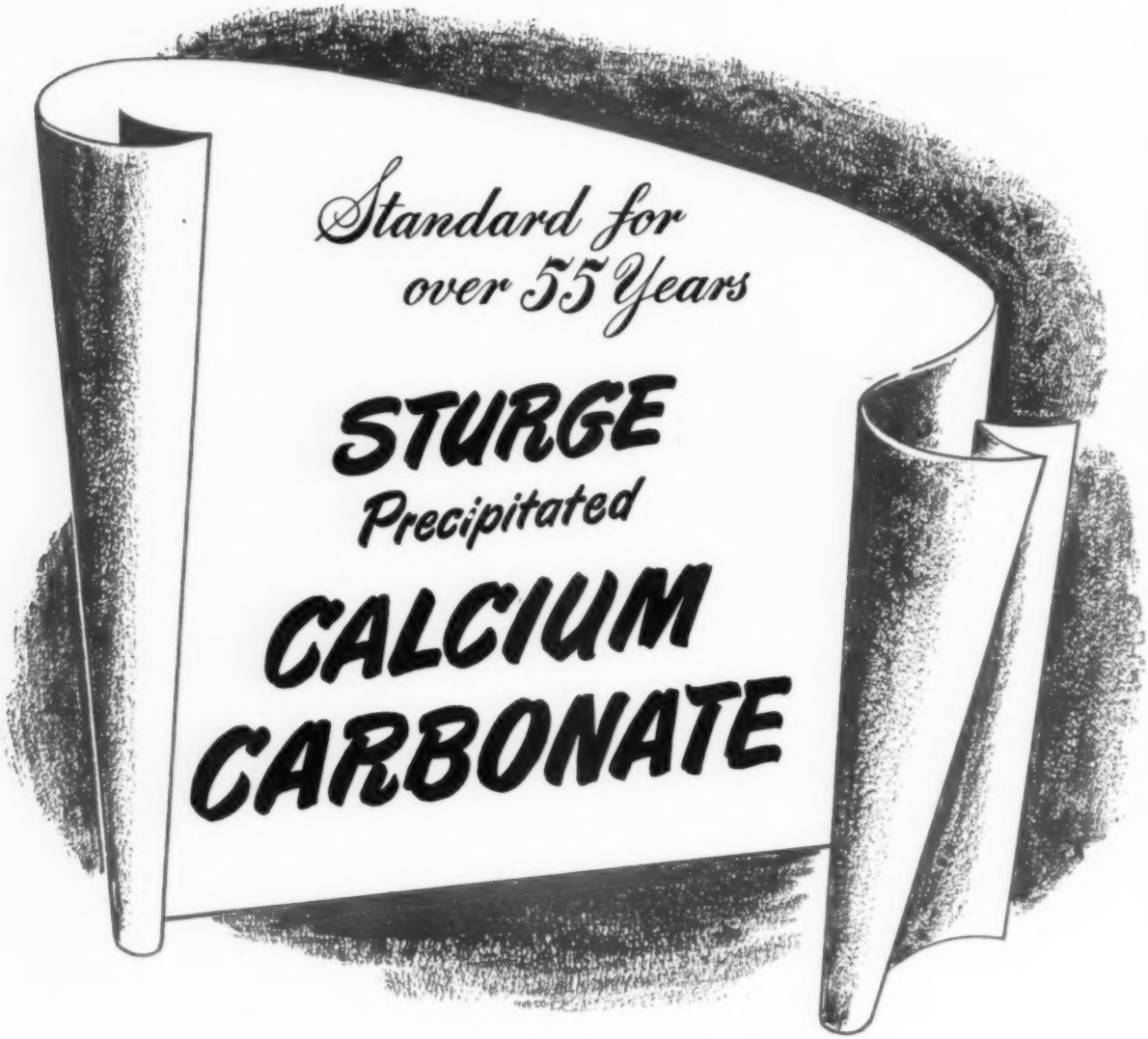

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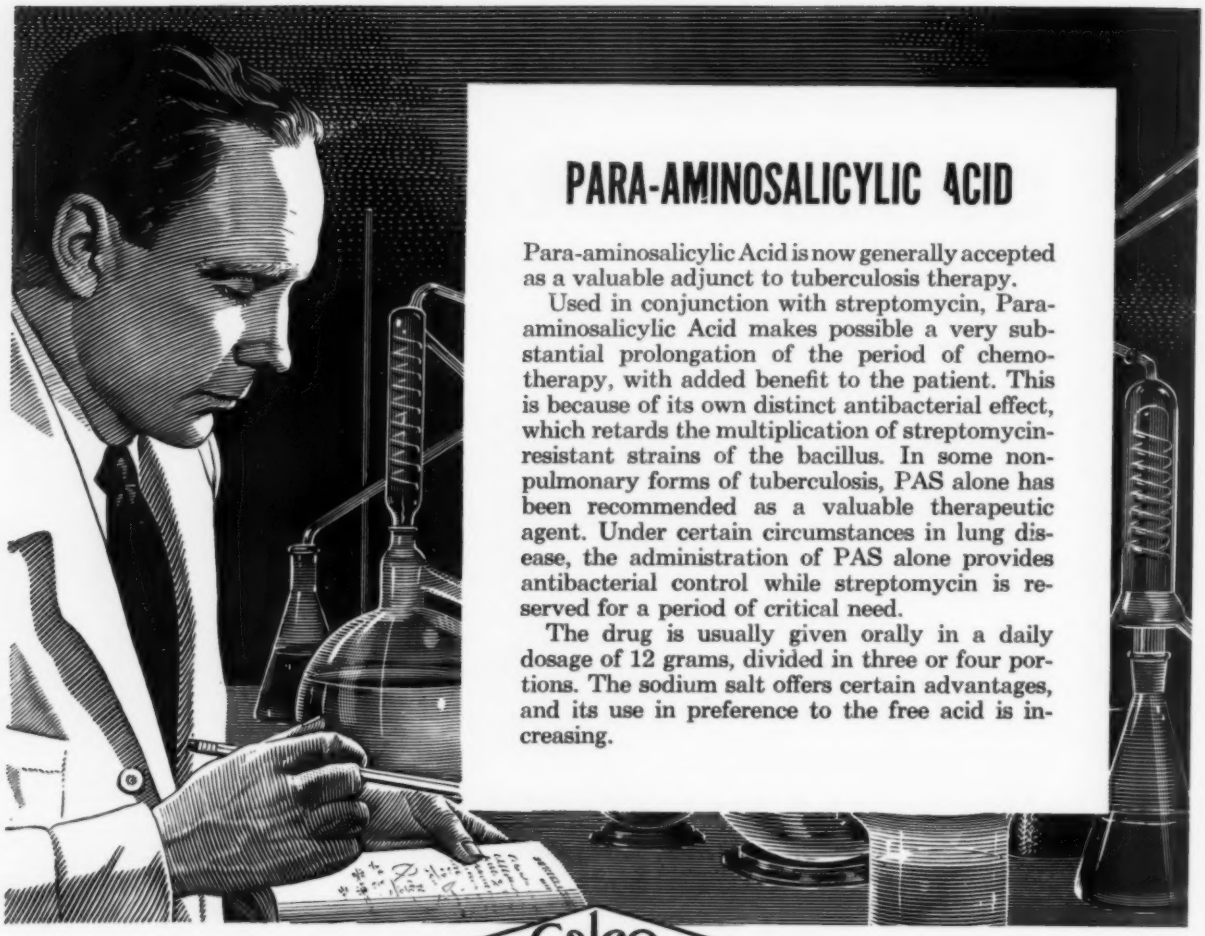

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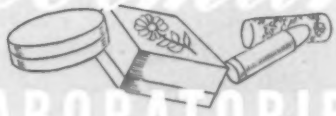

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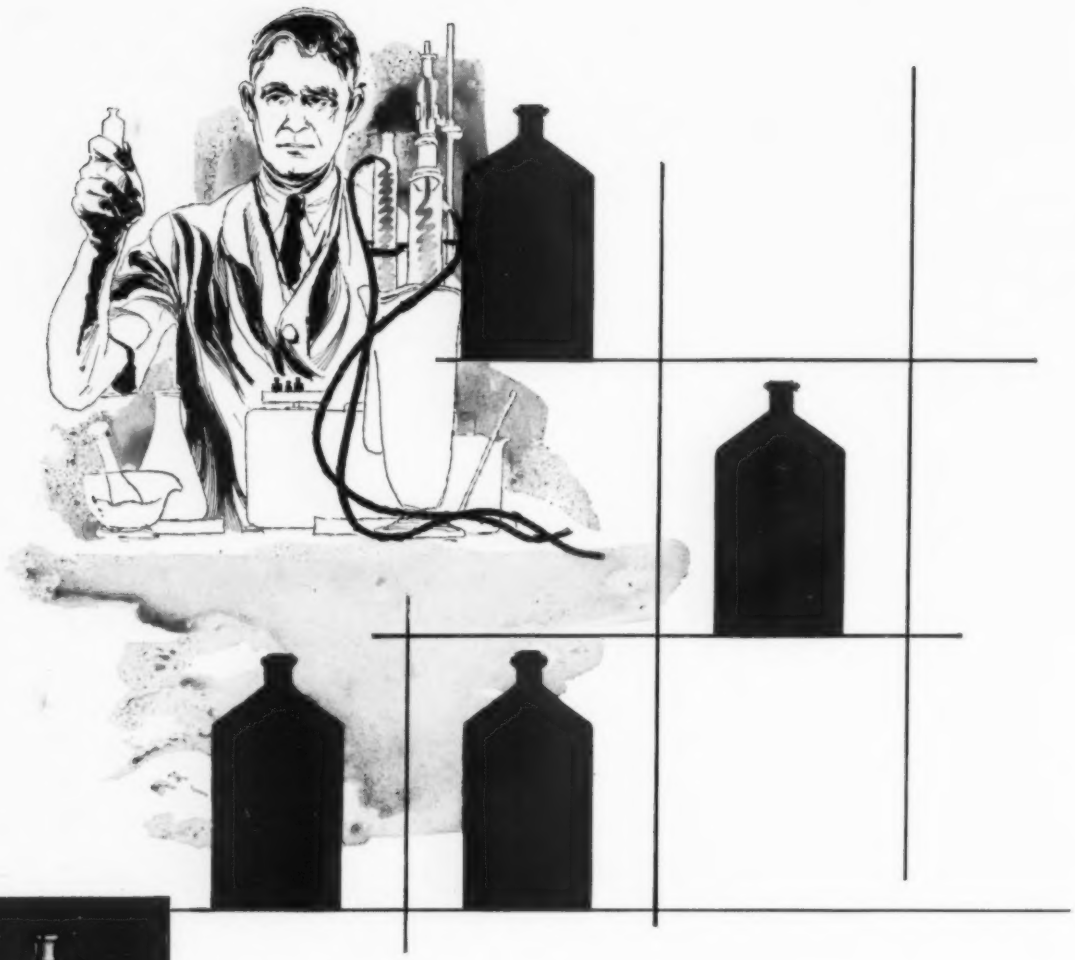

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The experimental data and practical manufacturing experience of nearly a hundred years' specialization in beeswax and beeswax compounds are at your service without cost or obligation. Write us about your beeswax problems.

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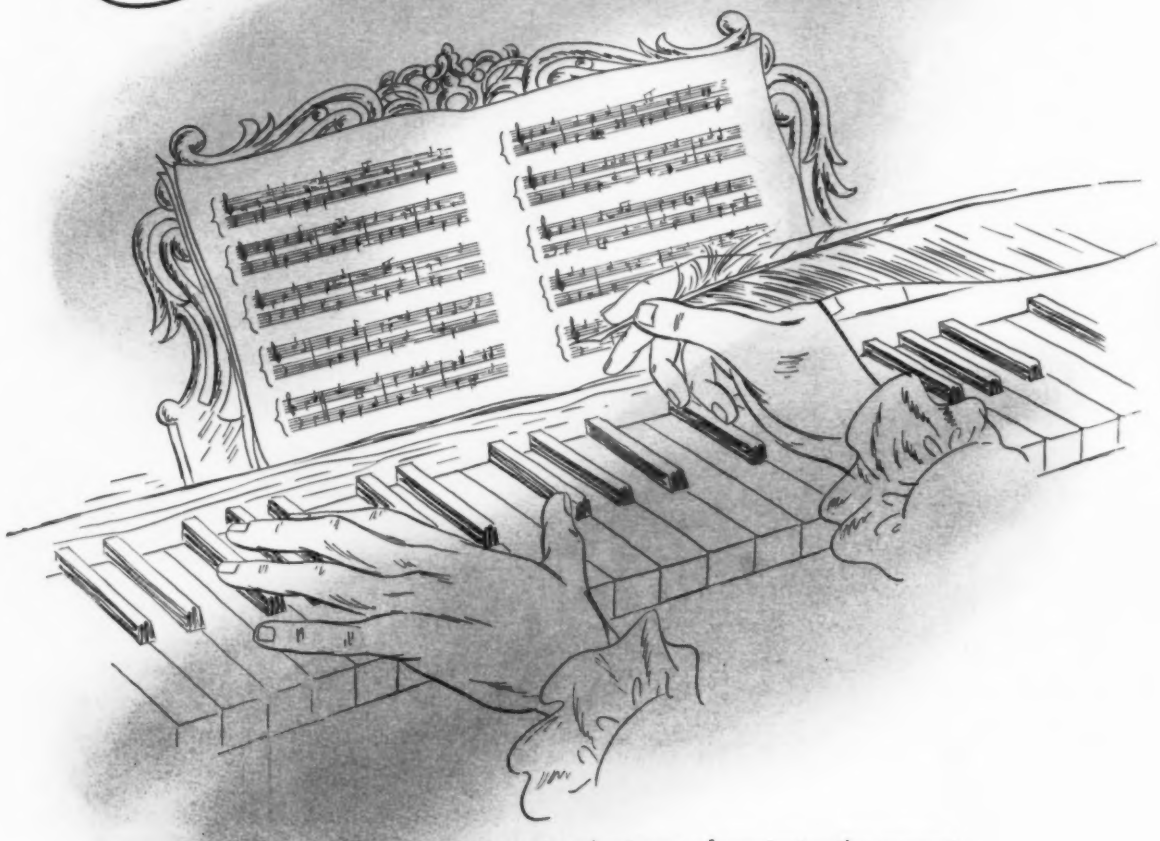
Creative Perfumery

sells your products



Creative Perfumery is the art and science of producing the correct, the perfect fragrance for any given product. More . . . **Creative Perfumery** is the dynamics of Fragrance applied to modern merchandising for easier selling . . . for more satisfied customers. With original notes, subtle compositions and imaginative harmonies **D&O Creative Perfumery** can become a compelling and successful factor in your Sales picture. Consult D&O.

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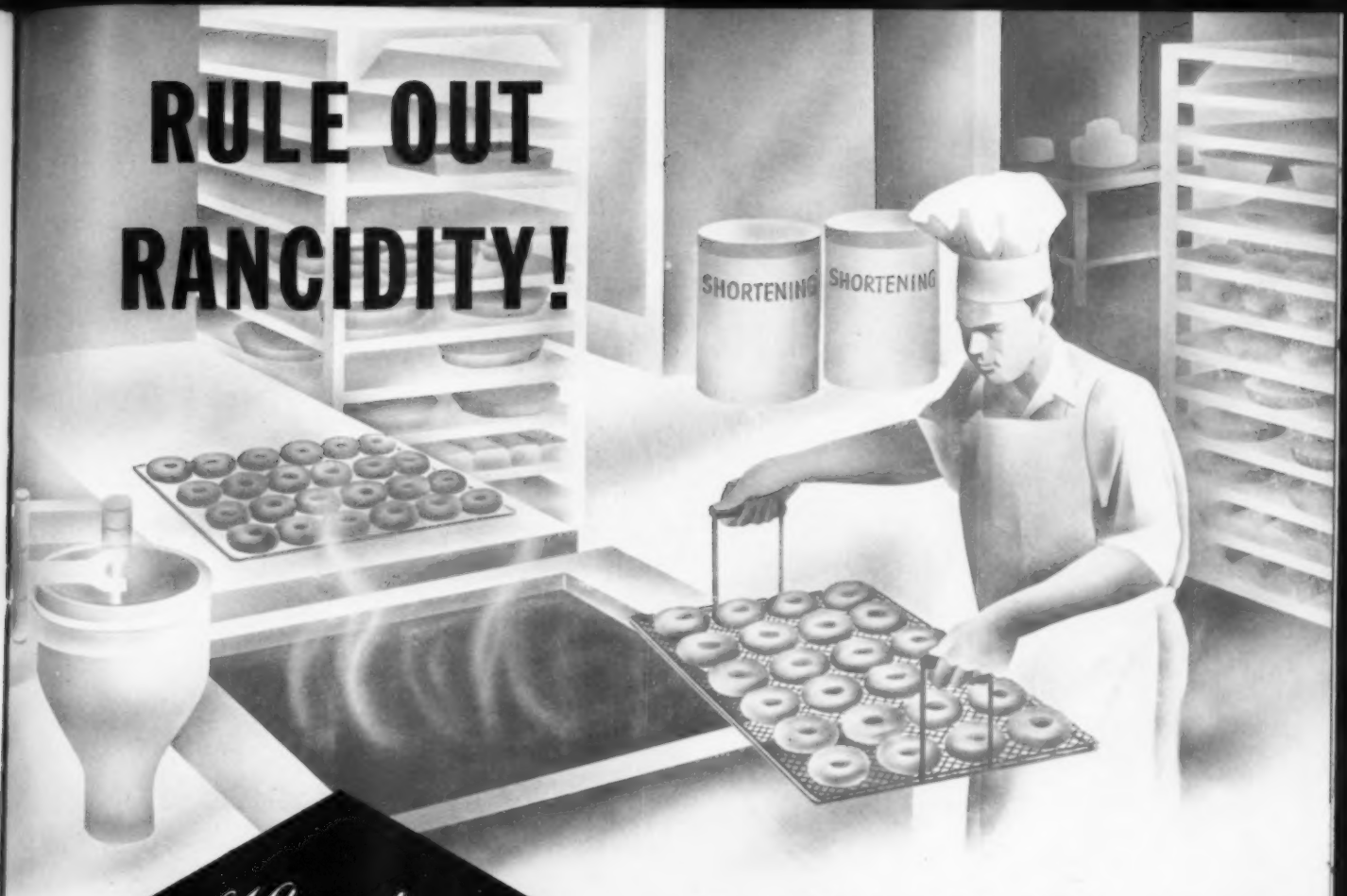

Heyden PROPYL GALLATE

antioxidant & stabilizer

Bakers and other users of shortenings know that freshness and sweetness must be safeguarded until the last bit is used. This is no less true of other materials that may turn rancid.

Protection against rancidity in oils and fats is easily secured with Heyden Propyl Gallate. Effective in low concentrations, this powerful antioxidant prolongs shelf-life and stabilizes color, odor and taste.

Propyl Gallate is a neutral, white powder approved by the Bureau of Animal Industry for use in animal fats. It also prevents auto-oxidation in waxes, ethers, emulsions and kindred products.

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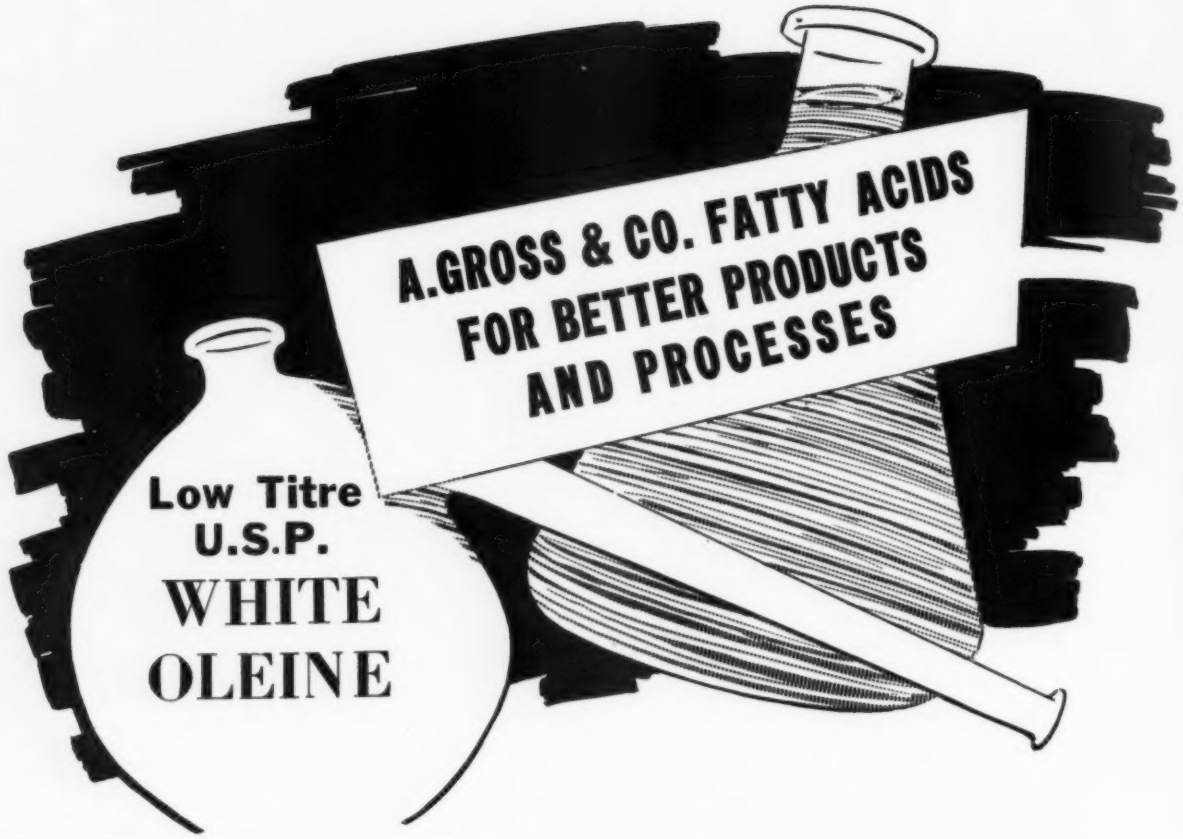

SPECIFICATIONS

Groco 6 — White Oleine U. S. P.

Titre	4° — 7°C.
Cloud Point	39° — 45°F.
Color Lovibond 5¼" Red	1.0 — 2.0
Color Lovibond 5¼" Yellow	8 — 12
Unsaponifiable %	1.5% max.
Saponification Value	198 — 201
Acid Value	197 — 200
% F. F. A. as Oleic Acid	99.0 — 100.0
Iodine Value (WIJS)	89 — 92

THIS low titre White Oleine (U.S.P. Oleic Acid) is a multiple distilled product made entirely from selected animal fats. A Gross & Company's modern distillation process yields a White Oleine superior in color, stability and free fatty acid content. *Write today for samples and also our new booklet, "Fatty Acids in Modern Industry."*

DISTRIBUTORS: *George Mann & Co., Inc.*, Providence 3, R. I.; *J. W. Stark Co.*, Detroit 2, Mich.; *Charles Albert Smith, Ltd.*, Toronto 3, Canada; *Braun-Knecht-Heimann Co.*, San Francisco 19, Calif.; *Thompson Hayward Chemical Co.*, Kansas City 3, Mo. (and branches); *Smead & Small, Inc.*, Cleveland 15, O.; *James O. Meyers & Sons*, Buffalo, N. Y.; *J. C. Ackerman Co.*, Pittsburgh, Pa.; *Baker Industrial Oils Co.*, Philadelphia 6, Pa.; *Moreland Chemical Co.*, Spartanburg, S. C.; *Southern Industrial Sales Corp.*, Tuscaloosa, Ala.; *Braun Corp.*, Los Angeles 21, Calif.

Blue gives your product an air of distinction and quality

Blue, traditionally a color that stands for quality and royalty, enhances your product and says, "Buy Me!" Blue is easier to see . . . easier to remember. Many famous brands have proved through years of use that Blue acts as a powerful advertising, merchandising and selling tool. Put your package to work for you as a container and a salesman. Write today for samples.

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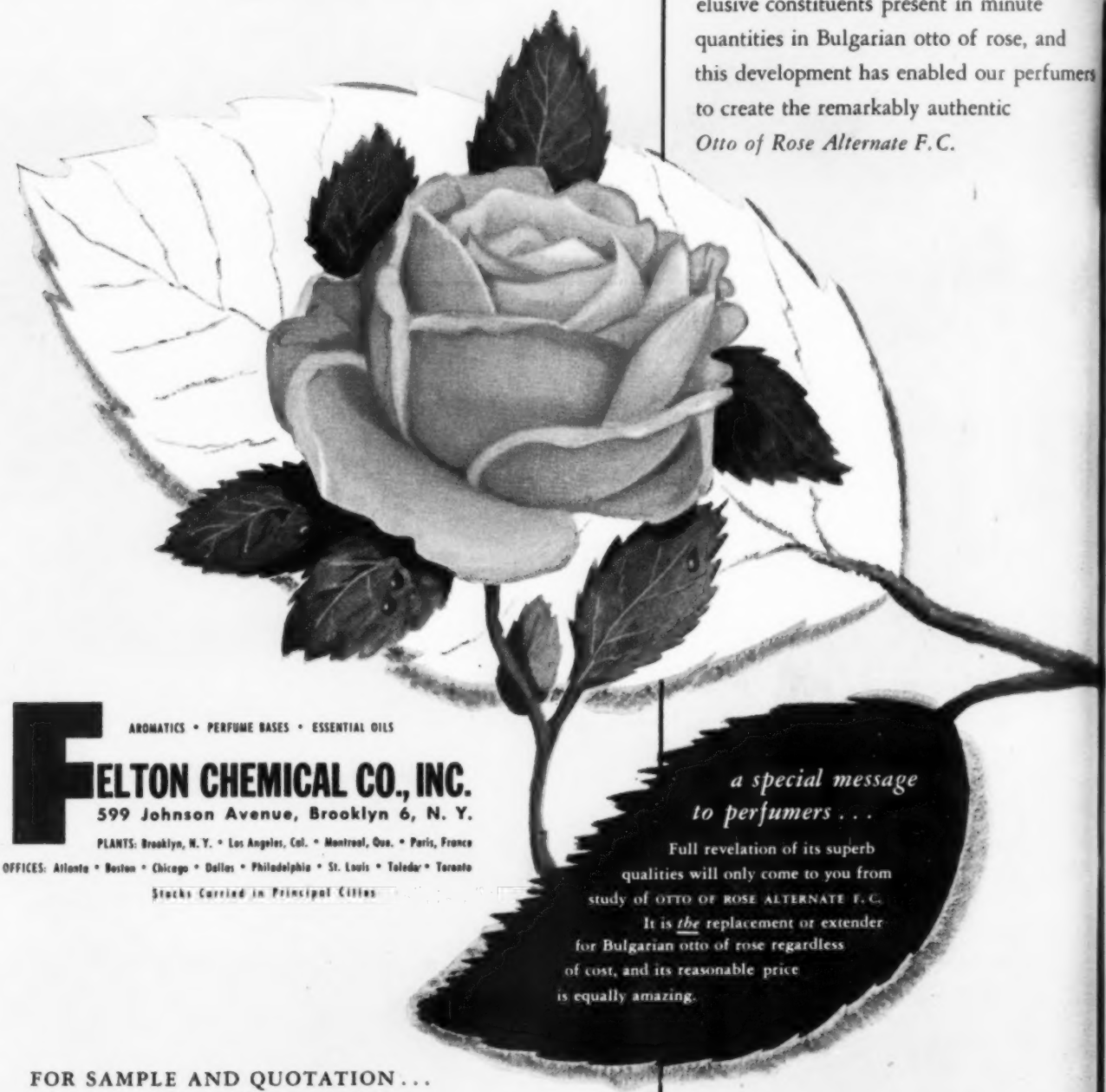
Never before has anyone succeeded in producing synthetically *all* of the full, rich, characteristic notes of true otto of rose. While most of the constituents of otto of rose have been known for many years, and while many good simulations have been made, true reproduction of the natural product has never been achieved before. Felton's achievement is the discovery and synthesis of those very important but elusive constituents present in minute quantities in Bulgarian otto of rose, and this development has enabled our perfumers to create the remarkably authentic *Otto of Rose Alternate F.C.*



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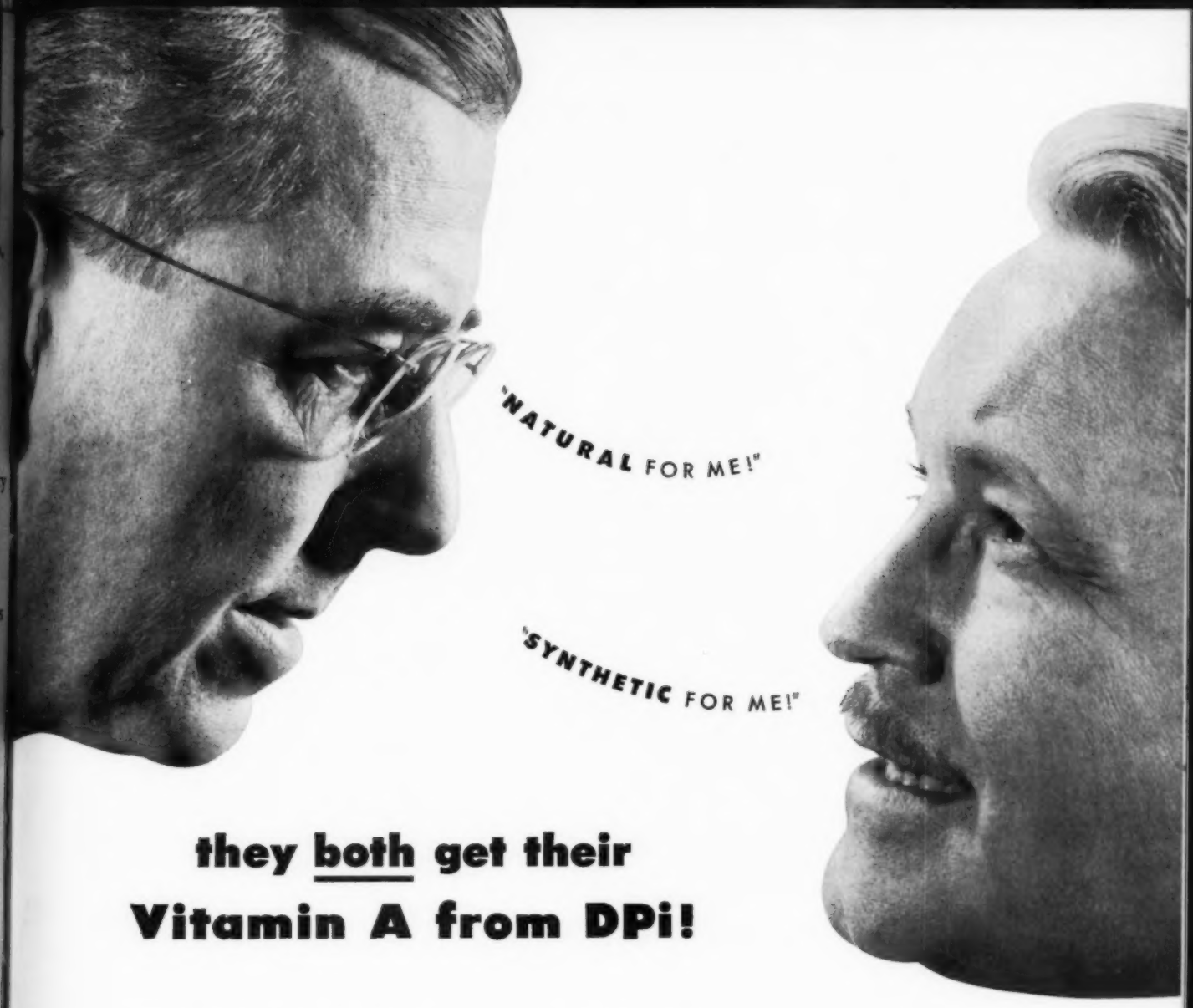
Full revelation of its superb qualities will only come to you from study of OTTO OF ROSE ALTERNATE F.C. It is *the* replacement or extender for Bulgarian otto of rose regardless of cost, and its reasonable price is equally amazing.

FOR SAMPLE AND QUOTATION . . .
write your name, title & address here & send it to us.



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IN natural vitamin A, DPi's distilled concentrate is the blandest, most stable form you can put into your products. This is a result of DPi's refining methods and—most important—DPi's unique process of molecular distillation.

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Coumarin Monsanto is a superior product of unexcelled, uniform purity; in fact, it is N. F. It comes in crystals of superlative whiteness and true aroma. It has excellent solubility and is easy and dependable to use.

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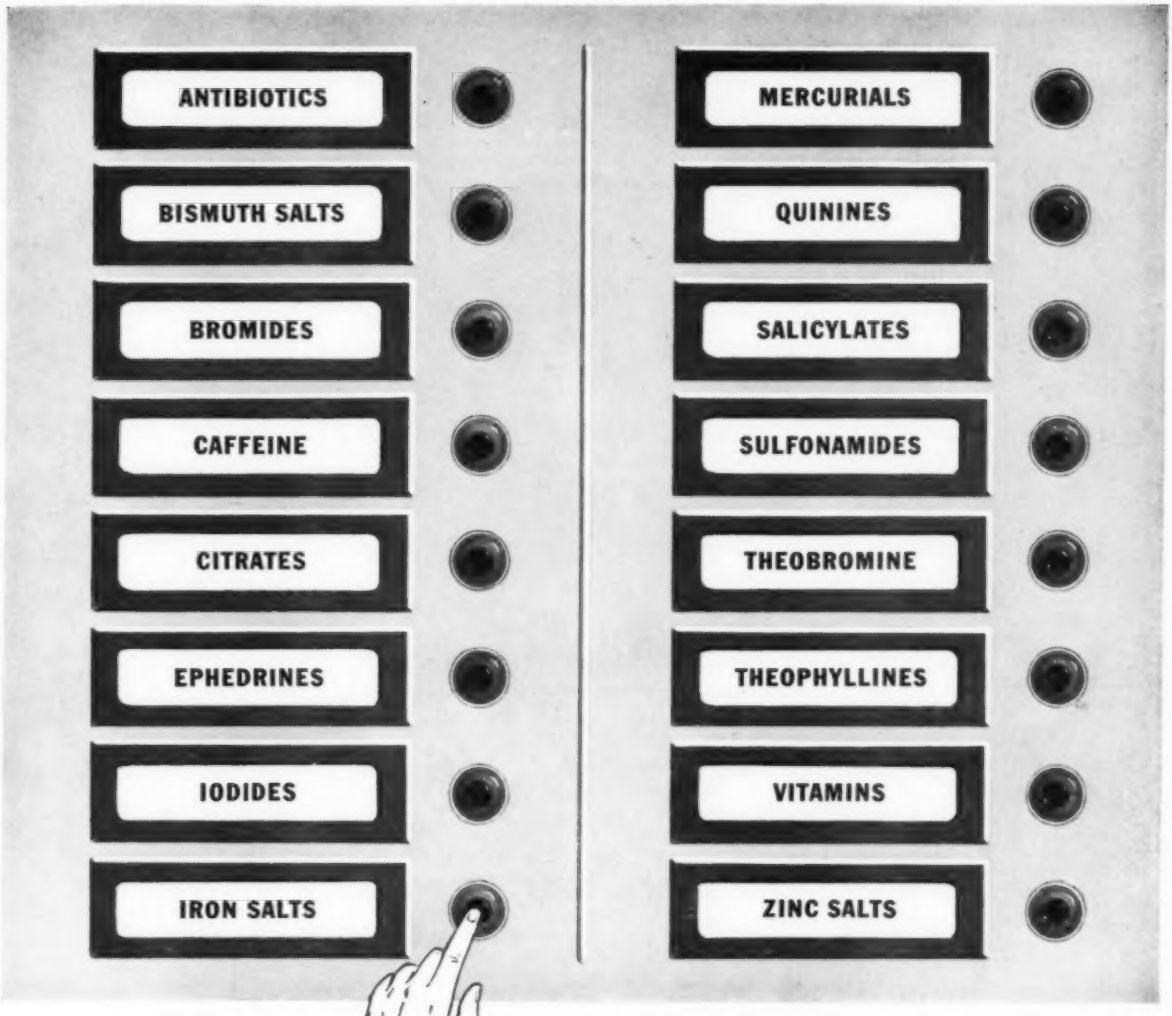

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MERCK LEADERSHIP in the field of fine chemicals is built on the long-established confidence of Merck customers . . . on the trust of countless chemical users in the purity and uniformity of Merck products . . . on the know-how acquired through many years of pioneering experience in the manufacture of fine and medicinal chemicals.

IT PAYS TO CALL ON MERCK

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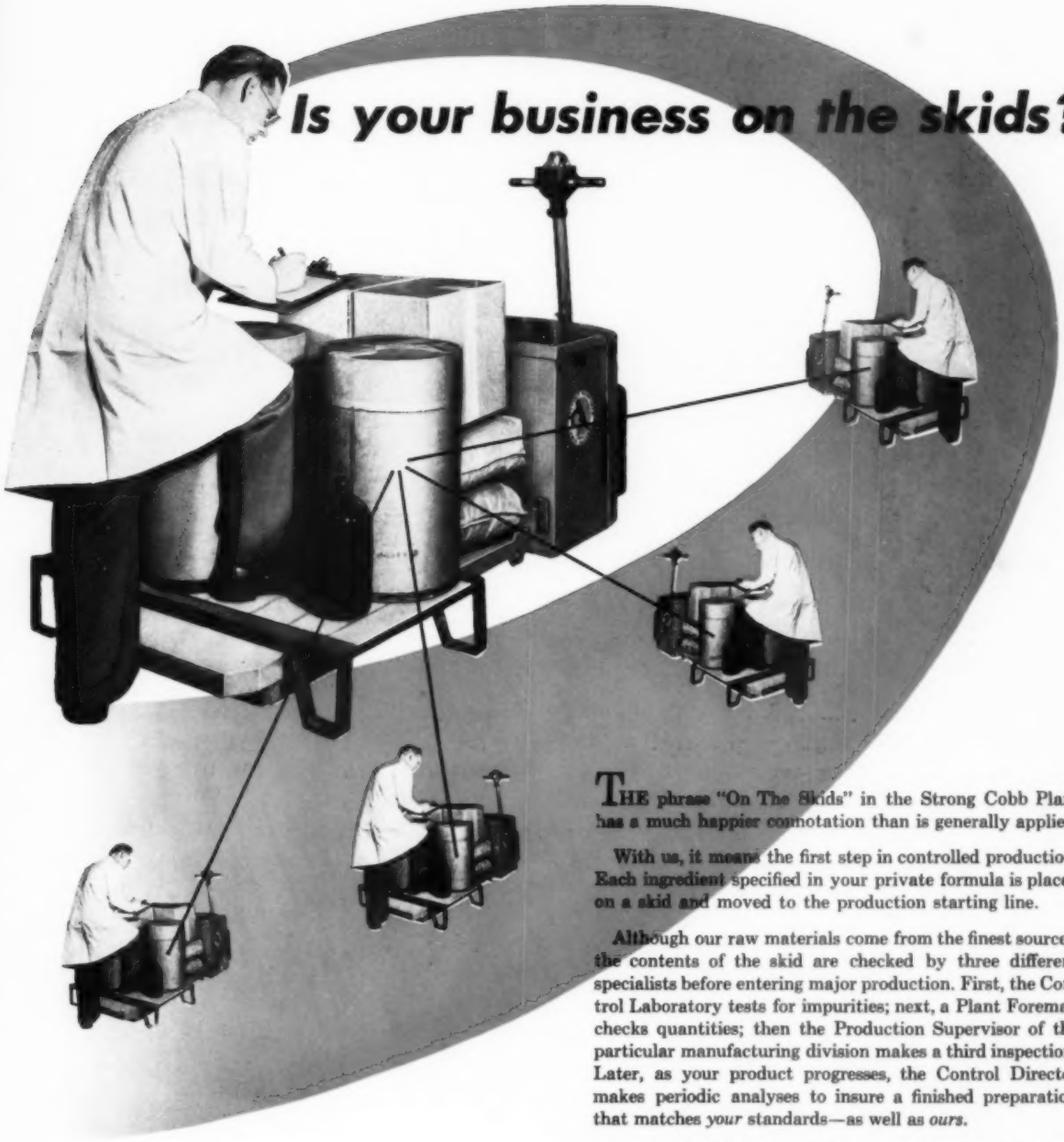
ESTABLISHED 1885

Is your business on the skids?



THE phrase "On The Skids" in the Strong Cobb Plant has a much happier connotation than is generally applied.

With us, it means the first step in controlled production. Each ingredient specified in your private formula is placed on a skid and moved to the production starting line.

Although our raw materials come from the finest sources, the contents of the skid are checked by three different specialists before entering major production. First, the Control Laboratory tests for impurities; next, a Plant Foreman checks quantities; then the Production Supervisor of the particular manufacturing division makes a third inspection. Later, as your product progresses, the Control Director makes periodic analyses to insure a finished preparation that matches *your* standards—as well as *ours*.

Yes, "on the skids" means triple checking at Strong Cobb. With your business on our skids, be assured of the finest, purest pharmaceutical product it is possible to produce.

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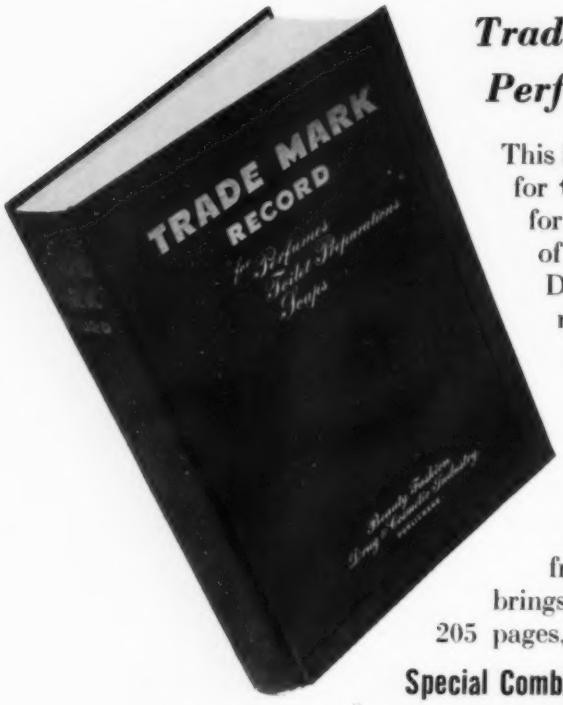

Trade Mark Record for Perfumes, Cosmetics, Soaps

This is the only published record of all the trade marks for this industry. Records over 60,000 trade marks for perfumes, cosmetics and soaps from the inception of the United States Patent Office right through December, 1945. It is invaluable to any cosmetic manufacturer planning to bring out a new product. 751 pages, 6¼ x 9¼.

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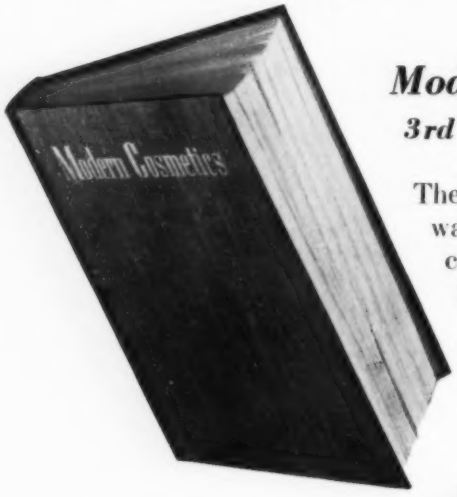
This directory has been in constant use for almost *twenty years!* It is the most comprehensive trade directory of sources of supply for everything used by the drug and cosmetic manufacturer . . . materials, equipment, containers. Special sections include price statistics, trade associations and membership lists, and a review of formulation articles and manufacturing processes. 500 pages, 9 x 12. Cloth, $3 postpaid in the United States, $4 postpaid elsewhere.



Modern Cosmetics, 3rd Edition, Thomssen

The first edition of Modern Cosmetics was published in 1934. Over 16,000 copies have since been sold in the United States and practically every country of the world. Modern Cosmetics is generally recognized as the original and foremost authority on the formulation and manufacture of all types of cosmetics. 644 pages, 6 x 9, Buckram, $8 postpaid anywhere.

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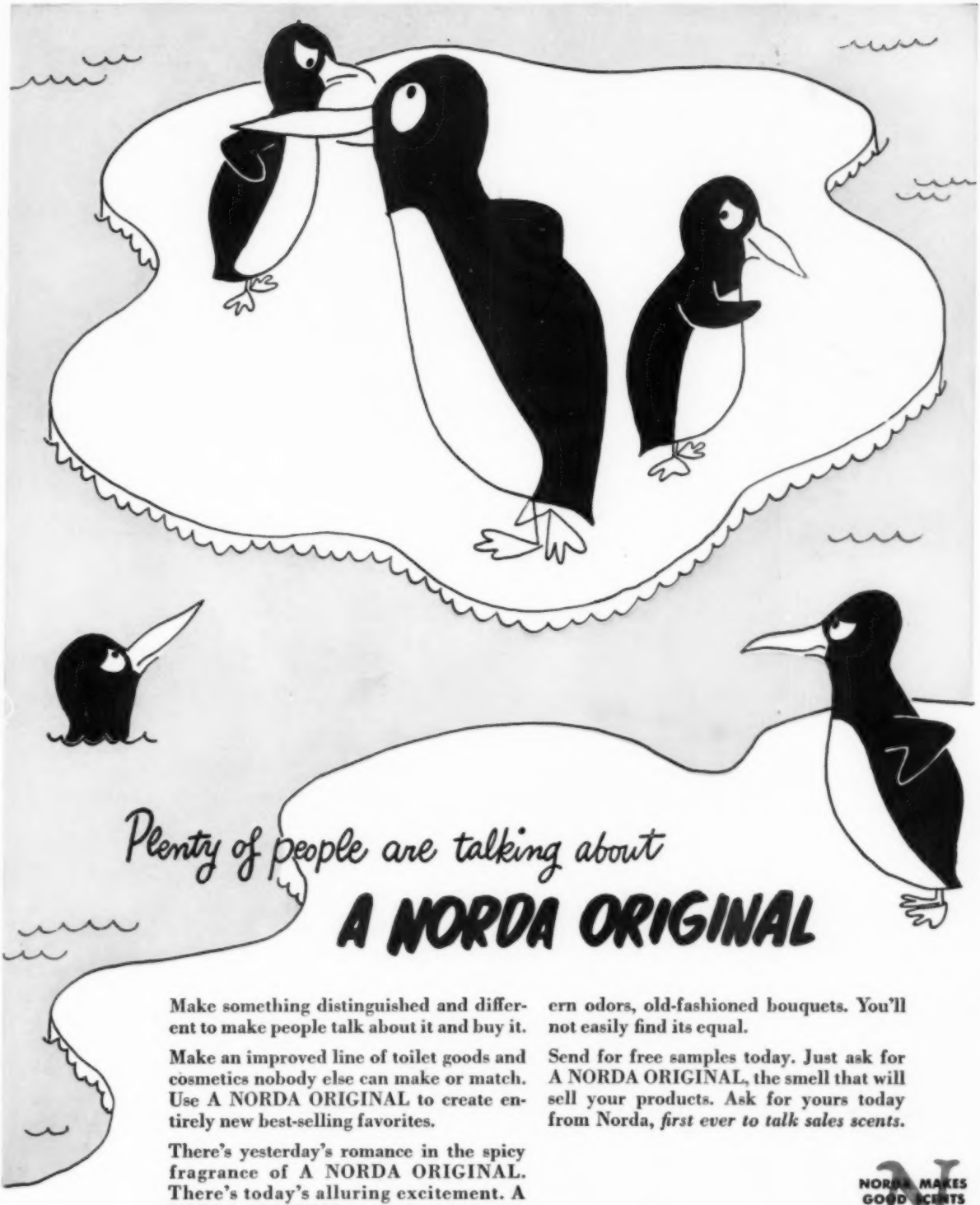

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Make something distinguished and different to make people talk about it and buy it.

Make an improved line of toilet goods and cosmetics nobody else can make or match. Use A NORDA ORIGINAL to create entirely new best-selling favorites.

There's yesterday's romance in the spicy fragrance of A NORDA ORIGINAL. There's today's alluring excitement. A NORDA ORIGINAL uniquely unites modern odors, old-fashioned bouquets. You'll not easily find its equal.

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There are many things more than precious oils and fine chemicals that go into the making of her perfume—and not the least of these is

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Our research teams are untiringly seeking new aromatic bodies through micro-analysis, molecular distillation, and all forms of higher organic chemistry. This effort results in new organic compounds, new isolates from existing materials, and improved techniques. Of the hundreds of research developments, relatively few are accepted for use in fine perfume materials. Yet around these new aromatics, the imaginative genius of the perfume chemist can create intriguing new and unusual fragrances.

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WITH YOU, SON...

If you're like many others in the pharmaceutical industry, you became accustomed to using Mallinckrodt chemicals in the chemistry class back in your student days. And many of you still specify Mallinckrodt chemicals whether you have since become a purchasing agent, research director, production manager, or top administrative executive.

Such loyalty is no accident. In 1919—about half a century after the founding of this business—Edward Mallinckrodt, Sr. expressed its continuing policy:

> **"We realized from the start that business depends on reciprocal relations and confidence; that we would have to establish a reputation for fair, honorable, liberal dealings and to make it to the interest of the buyer to place his orders with us, by supplying goods of the highest quality at competitive prices, giving prompt service and endeavoring to satisfy our customers as far as possible in every respect."**

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• MANUFACTURERS OF FINE CHEMICALS FOR THE PHARMACEUTICAL INDUSTRY • SINCE 1867 •

"Why don't you push suppositories? The supermarkets can't very well carry them."

KEEPING POSTED

F. T. C., Carter's Pills, and Advertising

IN ISSUANCE of a Cease and Desist Order, banning use of the word "liver" in the name of Carter's Little Liver Pills and also prohibiting all references to the liver in advertising of this product, Federal Trade Commissioner John Carson announced a new, stricter policy of law enforcement on the part of the Commission against unwarranted therapeutic claims for drug products. Commissioner Carson said that when the facts warrant such action, the advertising agency of the manufacturer or distributor will be included as a principal in the case, and all facts developed in the action which are not usuable by the Commission because of limited jurisdiction will be turned over to other appropriate agencies of the government.

In the Carter action, the Commission found that the product has "no therapeutic value in the treatment of any condition, disorder, or disease of the liver." Therefore the company, Carter Products, Inc., is ordered to stop disseminating advertisements in which the word "liver" is used in the trade name, or which make any claims that the product has any therapeutic value other than temporary relief afforded by an irritant laxative compound. The product's active ingredients as given by the Commission are podophyllum resin USP (podophyllin), 1/16 grain, and powdered aloes, ¼ grain. Stating that podophyllin is used as a laxative, purgative, or drastic carthartic, and aloes is one of the irritant carthartics ranking with senna, rhubarb, and cascara sagrada, the Commission unanimously concluded that unrestricted consumption of these laxative compounds invites injury to the health of the users, and the product is potentially injurious to persons suffering from appendicitis.

In a statement accompanying the order, Commissioner Carson defended the Commission against charges that it is opposed to advertising and self-medication. He said the Commission is not opposed to advertising, nor is any commissioner or any employee of the Commission opposed to advertising. He added:

"The advertising profession is an honorable profession. It has contributed tremendously to the sale and distribution of the products of business and thus has served the public interest. Likewise, the manufacture and distribution of medicinal preparations is an honorable business. It has every right to the respect had for the profession of medicine and many will agree that the medical profession is generally and should always be the most honorable of professions. But the time is here, in fact it has long passed, when those engaged in the manufacture and distribution of such preparations and those engaged in associated advertising businesses must take steps again, as they did some years ago, to rid the house of those who have less regard for the truth of their representations to the public."

After reviewing some of the expert testimony given during the long period of the hearings in the case, Commissioner Carson said:

"This body of factual testimony was obtained through the expenditure of public funds, in part, and it should not be permitted to become buried in government files. The Commission has decided that it will be called to the attention of other government agencies which are interested and that the Commission shall thus offer to cooperate in making use of it for the common good. The Commission will, hereafter, seek every opportunity to make use of comparable evidence so that the maximum of possible contribution shall be made to the consumers. We think the evidence should convince anyone that unrestricted consumption of laxative compounds often invites injury to the health of the consumer; and the advertising columns in many publications now indicate all too clearly that the consumption of laxatives has become a fad or a craze induced by high pressure advertising practices."

Plant Expansion for Dow

THE DOW Chemical Company will have spent close to $65 million for plant expansion by the end of the current fiscal year and plans to spend in excess of this amount for defense expansion the following year, said President Leland I. Doan recently. Much of the new capacity will be for chlorine and products derived from chlorine. Production of chlorinated hydrocarbons will also be boosted and Saran to make yarns for the carpeting industry and for automobile upholstery will be upped in production. About eighty per cent of magnesium production is going into defense items such as aircraft. Magnesium production is now about 60 to 65 million pounds, but Dow is reactivating several plants having productive capacity of 70 to 80 million pounds. About one-third of the company's styrene production is currently going into the Government's synthetic rubber program, and supplies to consumers of styrene plastic molding powders have been cut about 16 per cent. Expansion of styrene production is limited by the supply of benzol.

Sharp & Dohme Blood Plasma Plant

THE NEW $3 million plant of Sharp & Dohme at West Point, Pa., for the processing of blood plasma will be completed in August, President W. L. Dempsey announced at the stockholders meeting held last month. This plant is being built in cooperation with the Army and Navy and will be the largest plant of its kind servicing dried plasma to the Armed Forces. The company is also putting into operation a new chemical plant at a cost of several million dollars for production of the company's own drugs and also providing facilities for making new drugs coming out of research work.

Antibiotic Certification

THE CHANGE of attitude on the part of the pharmaceutical manufacturers toward a general antibiotic certification amendment to the Federal Food, Drug, and Cosmetic Act was revealed at the recent meeting of the American Pharmaceutical Manufacturers Association when that association adopted a resolution opposing such an amendment. The withdrawal of support of such an amendment by the A.P.M.A was on the recommendation of the joint task force composed of representatives of the American Drug Manufacturers Association, the A.P.M.A., and the Proprietary Association which has been concerned with this proposal since it first came up for consideration. Last year the associations were in favor of such an amendment, and they were still in favor of it at the annual meeting of the National Drug Trade Conference last December. But now all three of these associations are opposed to it and resolutions are being adopted at their annual meetings this Spring.

One of the major reasons for opposition to this legislation lies in the fact that Pfizer's antibiotic, Terramycin, released under the New Drug Section of the Food, Drug and Cosmetic Act, on March 23, 1950, has now been on the market for more than a year without being subjected to certification. Up to the time that Terramycin was introduced, the practice was for the Food and Drug Administration to seek enactment of an amendment to the Food, Drug, and Cosmetic Act for each antibiotic as it was introduced in the market. Because of the fact that these amendments requiring certification of specific antibiotics contained no provision for decertification when production and control methods for these drugs became well established, the industry supported a general antibiotic amendment which would contain decertification provisions. Why the FDA never started a real strong drive for a certification amendment for Terramycin is not quite clear, except that the FDA expected that a general certification amendment would soon be enacted and therefore Terramycin would come under that amendment. However, this amendment has not been enacted, and now that the manufacturers have reversed their attitude concerning such an amendment, the fight is on between the FDA and the industry.

Producing the only antibiotic now subject to certification is not the most pleasant position to be in, according to those in the know. Officials of the FDA have been said to state that they are constantly picking up lots of Terramycin in an effort to find lots which would prove that the drug should be subjected to certification. However, they apparently are not meeting with any success. Meanwhile, Pfizer is saving a tidy sum of money by not having to pay certification fees. And these fees are another reason why the industry is opposed to the whole certification program. It is claimed that since the certification program started, the FDA has taken in close to $3,000,000 in such fees. And the money thus taken in by the FDA does not go into the General Fund of the Government, but remains in the FDA. Thus the FDA has been able to take on more chemists, inspectors, and obtain more equipment with this money, always claiming that these things are necessary solely because of the work done on certification.

It now appears that the issue has been joined by the manufacturers with the FDA on this amendment. We fail to see what the FDA can do about it since every day that they find all the batches of antibiotics submitted to them by manufacturers satisfactory, and every day that they fail to find anything wrong with the Terramycin that Pfizer is marketing, just adds to the overwhelming proof already existent that certification of antibiotics is totally unnecessary at the present time when knowledge of antibiotics and their production is quite different than it was when production of penicillin was subject to many uncertainties.

All manufacturers of antibiotics, and Pfizer in particular, are on the spot in the present situation. They must not fail, and there must not be one single package of any of these antibiotics which deviates in the slightest from the standards set up for them.

A. D. M. A. Production and Engineering

THE PRODUCTION and Engineering Section of the American Drug Manufacturers Association, which meets annually, met at Hershey, Pa., May 14 and 15. The opening conference on Monday morning covered "The Washington Scene," with Norman F. Storm, Chief, Drug and Cosmetics Section, Chemicals Division, National Production Authority, answering many of the questions of pharmaceutical men with reference to current equipment and materials problems. In that session, also, Thomas A. Foster, U. S. Public Health Service outlined the functions of his agency in representing over-all civilian needs in the distribution of pharmaceutical products, with particular reference to the relationship of the U.S.P.H.S. to the productive organizations within the industry.

Harrison S. Backus, G. D. Searle & Co., was moderator of the Tuesday morning conference on "The Design and Operation of an Ideal Tablet Manufacturing Department." Other members of the panel included Thomas C. Anderson, Parke, Davis & Co.; Douglas C. McEvoy, Ciba Pharmaceutical Products, representing engineering; R. J. Hennessy, Lederle Laboratories Division of American Cyanamid Company, representing packaging; and Dr. Harry E. Sagen, Abbott Laboratories, representing process control.

Round table discussion groups, in which all member sections participated, occurred Monday and Tuesday afternoons on the following subjects: "Materials and Equipment Under the Mobilization Program," "Tablet Manufacturing Equipment," "Conditions for Tablet Manufacture," "Packaging Equipment Developments," "Tablet Packaging Material and Design," "Pharmaceutical Development," "Tabulating Equipment as a Service to Production."

Lt. General Leslie R. Groves, U.S.A. (Ret.) was the banquet speaker on Monday evening. In the direction of the development and production of the first atomic bomb, General Groves' combined engineering experiences and organizational accomplishments are unparalelled in the history of the world, and therefore his comments were of particular interest to members of the Production and Engineering Section in their studies of both technical and administrative problems.

Baekeland Award to Dr. Sarett

UPON BEING awarded the 1951 Leo Hendrik Baekeland Award for his synthesis of cortisone, Dr. Lewis H. Sarett, of Merck & Co., again called attention to the fact that sufficient supplies of this important drug can never be obtained from the present sole source—ox bile. However, Dr. Sarett predicted abundant supplies of cortisone in the future, basing his prediction on the encouraging results obtained in the widespread search for new sources and also on the intensive efforts of many laboratories to achieve total synthesis.

Dr. Sarett, who is 33 years old, and who synthesized cortisone when he was 27 years old, is the youngest scientist to receive the Baekeland Award which is given biennially to scientists under 40. The Award consists of a gold medal and $1,000 in cash. Dr. Randolph T. Major, vice-president and scientific director of Merck, pointed out that if the importance of Dr. Sarett's work had not been appreciated by the government to the extent that he was deferred from military service, cortisone would not be available today. Dr. Major termed this a "dramatic example" of the need to defer young scientists doing essential work in industry and in the universities.

Cortisone has opened up a wholly new approach to the fundamental study of disease, promising benefits to mankind which may even outweigh its enormous value in the treatment of arthritis and other maladies, said Dr. Sarett, who continued:

"Cortisone is not only being used in routine treatment of tens of thousands of individual patients, but—perhaps even more significantly from the standpoint of the future of theoretical medicine—in countless experiments aimed at elucidating the intimate nature of disease."

In the past year alone, reports on some 1,000 different medical investigations of the effects of cortisone in human pathology have been published, said Dr. Sarett, quoting a statement of Dr. Peter H. Forsham of the Harvard University Medical School that cortisone, by offering an opportunity to observe disease "without sickness" has ushered in a new era in medicine.

Antibiotic Warning Statement

THE Food and Drug Administration has ordered a warning statement to be carried by all antibiotics regarding the likelihood of these drugs causing the overgrowth of other organisms, including fungi, in the body. The FDA statement, dated April 6, reads:

"Since the beginning of the use of antibiotics, reports have appeared in the literature to indicate that the suppression or inhibition of growth of certain bacteria may be accompanied by, or followed by overgrowth of other organisms, including fungi. In some situations the resultant overgrowth of organisms may produce a clinical infection of the lungs, skin, pharynx, female genitals, or intestinal tract. Deaths from generalized nonilial infections complicating the therapeutic use of antibiotics have occurred.

"In view of the above facts the Food and Drug Administration recommends to all manufacturers and distributors of antibiotic drugs that the labeling include a statement such as the following:

"WARNING: The use of this product may result in the overgrowth of non-susceptible organisms—particularly nonilia. Constant observation of the patient is essential. If new infections due to bacteria or fungi appear during therapy, appropriate measures should be taken."

Glass Container Restrictions

NPA ORDER M-51 prohibits the creation of new designs for glass containers by limiting manufacture and use of existing designs which are from time to time included in a schedule to be issued under this order. The order also provides that the NPA may require the use of glass containers or simplified designs for the packaging of products to be specified.

Promise of Cortisone Synthesis

FOLLOWING the prediction of Dr. Lewis H. Sarett, of Merck & Co., on April 23, that abundant supplies of cortisone would be available in the future as the result of promise held out by present research, a discovery of total synthesis which will lead to cortisone was announced April 25. Starting with ortho-toluidine, which is a common intermediate one simple step removed from aniline, and two simple steps removed from benzol, a research group at Harvard University, headed by Prof. Robert Burns Woodward, has synthesized a new basic steroid. Only a few relatively easy steps, expected to be accomplished by the end of the Summer, if not earlier, remain to convert this substance into cortisone. It is also predicted that this new basic synthetic steroid may make possible the synthetic production of numerous other steroid hormones. When Professor Woodward was interviewed in London for the New York Times on April 25, he said:

"We have not synthesized cortisone. Since steroids are transformable one into another, this opens the prospect of a possible conversion of present synthetic steroid into cortisone and/or other steroids. But we haven't done it yet, and it will take a lot of hard work to do it. I don't know how many operations will be required before we get cortisone, nor how long it will take. It may even be impossible."

The synthesis is a result of work extending over sixteen months and participated in by six research chemists and technicians. Large amounts of starting materials were supplied by Merck & Co., and Monsanto Chemical Company. Merck & Co. also supplied the original financial support for the project. The work was further supported by a grant from the Research Corporation. In accordance with the long-standing policy of Harvard University, any practical results in the field of medicine will be administered in the public interest and will not be available exclusively to one manufacturer. In this case it will be effected through the administration and non-exclusive licensing of the patents by the Research Corporation, a non-profit foundation whose total net income is distributed in the form of grants in aid of science.

Castor Oil Use Cut

A CUT to 30 per cent of the amount of castor oil used in cosmetics has been ordered by the Production and Marketing Administration of the Department of Agriculture, under Defense Food Order No. 1. The restriction is effective starting April 1, and the curtailment of use is based upon the last three months of 1940. Also the amount of castor oil which may be received is limited to the amount of oil whose addition to the quantity already in inventory, would not total more than one-third of the permitted usage during the calendar quarter in which it is received. Special provisions are made for tank car deliveries. Medicinal and pharmaceutical preparations use is limited to 100 per cent of the base period, and hydrogenated, saponified, fractionated, and chemically dehydrated castor oil, and sulfonated oil manufacture is limited to 60 per cent.

Baby Products Market

A NUMBER of factors have combined to expand the market for baby toiletries to an unprecedented height, with prospects of new records being established for 1951, says Peter B. B. Andrews, in the April Merck Report. In 1950, baby powder sales exceeded $10 million, against $9.25 million in 1949. Baby oil sales in 1950 approximated $7 million, against about $6.5 million in 1949. Baby lotions totaled about $6.2 million in 1950, against about $5.9 million in 1949. Of potential importance to this market is the fact that the national birth rate is running in excess of 3.5 million babies per year. Also significant is the declining baby mortality rate which is expected to continue downward as a result of the wider use of antibiotics, increased hospitalization, improved infant care programs, and a generally higher standard of living for a greater part of the population. The infant mortality rate last year was the lowest ever—31 per 1,000 live births. In 1949, there were 11,200 infant deaths, against 113,169 in 1948, a 1.7 per cent decline. Numbers of married persons and of families are on the rise. In 1950, 68 per cent of the population 14 years and over was married, compared with 60 per cent in 1940. There was an increase of approximately 6 million families from 1940 to 1950—a total of 32.2 million in April 1940 against a total of 38.5 million ten years later.

Potential sales of baby supplies per baby should run about $4,000 per average retail drug store, according to Mr. Andrews. Having a baby supplies department also will help to increase other sales through gain in store traffic, since a mother has to return frequently for refills, in that a baby requires, for example, about 60 ounces of oil during his first 12 months if he is properly lubricated.

F. T. C. Deodorant Order Modified

WHILE Carter Products, Inc., recently had issued against them a rather harsh Cease and Desist Order concerning advertising of Carter's Little Liver Pills, the same company previously had won modification in an appeal to the U. S. Court of Appeals, 7th Circuit, of a Cease and Desist Order issued against advertising of its deodorant, Arrid. With regard to the main issue as to whether or not the manufacturer could use only the word "temporary" in claims to terminate or bring to an end the flow of underarm perspiration, the Court said:

"Where medical experts experienced in dermatology testified that cosmetic deodorant would remain effective as a deodorant from three to six hours, ten to twelve and maybe fourteen hours, four to ten hours, four to twenty-four hours, and fifteen to twenty hours, cease and desist order of the Federal Trade Commission requiring manufacturer to use the word 'temporary' in referring to the length of time that deodorant was effective as a deodorant, would be modified to permit omission of the word 'temporary' and order would be modified to permit manufacturer to advertise that deodorant was effective where used daily or as frequently as found necessary."

Regarding the use of Arrid as an antiperspirant, the Court held:

"(2) Paragraph 1 (a) of the cease and desist order will be modified by the elimination of the clause, 'or that it will be more than temporarily effective in reducing the flow of perspiration,' and by adding at the end of the undeleted portion of such subsection the following italicized words, so that the subsection will read:

" '(a) That the application of said preparation stops underarm perspiration; *provided, however, that nothing herein shall prevent the respondent from representing that the use of ARRID will prevent the appearance of perspiration when used as directed, namely, 'daily' or 'as frequently as you find necessary.'* "

The following part of the order was sustained:

"That the petitioners cease and desist from representing that 'said preparation is safe and harmless to use, without disclosing that it may cause irritation of sensitive skin."

This apparently means that when no claim is made that the preparation is safe or harmless when used, then it is not necessary to include the statement "This preparation is not harmless, and its use will cause skin irritations and dermatitis in some people."

From the above modifications of the order, it is not necessary to include in advertising of antiperspirants the words "temporarily effective" when the product is effective if used as directed, namely, "daily or as frequently as necessary."

N. W. D. A. Seeks Association Program

THE NATIONAL Wholesale Druggists Association has engaged the services of Roscoe Edlund to conduct a study which will cover the period of the next four months and will be designed to provide the Board of Control and officers of the Association with an objective analysis of the Association, its activities, and its position in the industry. The reasons behind this are that the officials of the Association have felt for some time that the Association may well need a long term plan or program of operation. "Typically, at our semi-annual Board meeting," it is explained, "research projects are adopted which are constructive. However, many times they are adopted hurriedly and as a matter of expediency rather than as part of an over-all program. Occasionally, too, members will suggest to us or to members of the Board of Control that in their opinion the emphasis in our Association work may be misplaced. Question is raised then as to whether or not we are in fact, as an association, doing the best possible job for our members and the industry."

Mr. Edlund has had some twenty-odd years' experience in associations closely related to the N.W.D.A., for twenty years being manager of American Soap and Glycerine Producers Association. His objective will be to secure the views of members on questions such as the following:

What benefits do members feel they receive from the Association?

How do members view the relative importance of various Association activities?

Is there a real understanding of what the Association is doing?

Are we engaged in all of the activities which would be proper for the Association and constructive for its members?

What suggestions do you have for our program for the future which would be constructive?

Following this study, Mr. Edlund will have a report available to present to the Board of control at the annual meeting in Houston, Texas next Fall. Since it will be impossible for Mr. Edlund to visit every member, it is requested that members give the matter serious thought and write their views to the Association headquarters in New York, or direct to Mr. Edlund at 250 Park Ave., New York 17. The total cost of the survey, including travel, has been estimated at approximately $10,000.

F. D. A. Funds

IN REPORTING the appropriation bill for the Department of Labor, the Federal Security Administration, and related independent agencies, the House Committee noted as follows with reference to the budget for the Food and Drug Administration:

"The committee has cut the budget request for operations of this agency $50,000 allowing $5,345,000. This is a net increase of $78,300 over currently available funds, but taking into account elimination of nonrecurring items from its present budget, sufficient funds have been allowed to meet mandatory cost increases and to provide for full-year operation in enforcing the oleomargarine law."

Warner-Hudnut Facts

IN OFFERING common stock for sale, Warner-Hudnut, Inc., reveals that total sales in 1950 were $37,845,000, against $37,824,000 in 1949, $34,534,000 in 1948, and $31,279 in 1947. From 1948 to 1950, the sales of cosmetics dominated the picture at an increasing rate. In 1948, cosmetics accounted for 60 per cent of sales the total for cosmetics being $2,720,400. In 1949 the cosmetic percentage rose to 66, with sales of $24,963,840; and in 1950 this percentage rose to 68 for cosmetic sales of $25,734,600.

The ethical drug business declined in percentage of total sales from 22 per cent in 1948 to 21 per cent for 1949 and 1950, and rose very slightly in dollar volume. The sales figures of this classification are $7,597,480 for 1948; $7,943,040 for 1949; and $7,947,450 for 1950. Proprietary drugs declined both in percentage of sales and in dollar volume for these years, representing 10 per cent of total sales in 1948 for a dollar volume of $3,453,400. In 1949 this percentage declined to 7, for a sales volume of $2,647,680; and in 1950 it declined to 6 per cent for a volume of $2,270,700.

Export volume likewise declined. In 1948 this classification stood at 8 per cent of the sales volume with a figure of $2,762,720; in 1949, it represented only 6 per cent of sales with a dollar volume of $2,269,440; and in 1950 it stood at 5 per cent of sales, with a volume of $1,892,750.

While cosmetics account for the major part of the total sales of the company, the medicinal products lead in the foreign markets. Sales of foreign consolidated subsidiaries in 1948 consisted of 60 per cent medicinal products, and 40 per cent cosmetics; in 1949, 57 per cent medicinal, and 43 per cent cosmetic; and in 1950, 62 per cent medicinal, and 38 per cent cosmetic.

Cosmetic and perfumes sales are the combined totals of the company's two subsidiaries, Richard Hudnut and Perfumes Ciro, Inc.

Advertising expenditures of the company in the United States totaled $3,620,904 in 1948; $4,011,498 in 1949; and $4,896,429 in 1950.

The company's cosmetics and perfumes grouped as to products or lines in the order of their sales volume (including export sales) for 1950 are:

Richard Hudnut Home Permanent Wave
Hair Preparations (cremes, rinses, shampoos, etc.)
Perfumes and Toilet Waters
Creams and Lotions
Powders
Chen Yu (manicure and make-up items)
Compacts and Lipsticks
Courtley (men's toiletries line)
DuBarry Beauty Preparations (kits, sets, etc.)
Vanities and Sundries

Cosmetics are either sold under or identified with the name "Richard Hudnut" and, in some cases in conjunction with the trade names, "DuBarry", "Gemey", "Three Flowers", "Chen Yu", "Courtley", or "Yanky Clover". Some perfumes are identified with the name "Ciro".

The principal ethical pharmaceutical specialties, identified with the name William R. Warner, listed in order of sales volume (including export sales) for 1950, are:

Gelusil (antacid adsorbent)
Anusol (hemorrhoidal suppositories)
Agarol (mineral oil emulsion)
Thera-Vita (therapeutic vitamin)
Omni-Beta (vitamin B preparation)
Hemosules (treatment for anemia)
Alka-Zane (systemic alkalizer)
Gelu-Cillin (penicillin tablet)
Diatrine (antihistamine)
Heparin/Pitkin-Menstruum (anti-coagulant)
Stigminene (antispasmodic)

The principal proprietary specialties and toiletries, identified with the name Standard Laboratories, Inc., listed in order of their sales volume (including export sales) for 1950 are:

Sloan's liniment (for muscular pains and aches)
Veracolate (cholagogue evacuant)
Waterbury's Compound (tonic)
Vince (mouth wash, gargle and dentifrice)
Bathasweet (bath powders, oils, soaps, accessories, and colognes)
Nonspi (deodorant)
Lorate (antiseptic)
Hobson's Preparations (diversified proprietaries)
Stacomb (hair dressing)

During 1947 and thereafter the company eliminated a number of products with low sales volume from its proprietary drug specialty line, and since that time the aggregate sales volume of this line of products has shown an accompanying decrease in volume.

Earnings of the company for 1950 were $2,540,000; for 1949, $2,875,000; for 1948, $2,706,000; for 1947, $721,000.

The stock offered is 320,000 shares of common stock of $1 par value, at $19.75 per share. The capitalization of the company is to show outstanding a bank note of $2,000,000; 78,466⅔ shares of 6 per cent First Preferred Stock Cumulative (par value $100 per share); and 958,625 shares of Common Stock (par value $1 per share); and 30,000 shares of the Common Stock reserved for an Executive Stock Purchase Plan.

H. I. F. to Study Medical Expenditures

UNDER a grant of $92,000 from the Health Information Foundation, Columbia University will make a two-year study to determine how Americans spend the approximately eight billion dollars which they pay annually for private medical and hospital care. Assistant Professor Oscar Serbein Jr. of Columbia's graduate School of Business is in charge of the project. According to Professor Serbein, nearly four dollars out of each hundred spent in the United States during 1949 went for medical care, but no one knows how the money was spent. Thus a part of the work of the survey will be to ascertain such facts as the number of individuals covered by medical and hospital pre-payment plans, the types of illnesses covered, the medical services provided for combating them, and the possibilities for further progress in such plans. The findings will be made available to the public.

VITAMIN AND MINERAL CLAIMS

The Mytinger & Casselberry case, involving alleged misbranding in the sale of Nutrilite Food Supplement, has been settled by a consent decree. The decree sets forth clearly what claims are allowed, and what claims are not allowed to be made for vitamin and mineral preparations by the Food and Drug Administration. Also it indicates how the Food and Drug Administration intends to exercise control over house-to-house sellers of foods and drugs.

THE ACTION brought by the Food and Drug Administration against Mytinger & Casselberry, Inc., involving alleged misbranding of Nutrilite Food Supplement — a vitamin and mineral preparation — has been settled by consent decree in the U. S. District Court for the Southern District of California, Central Division. It was before this court that the consolidated libel proceedings resulting from the multiple seizures made by the Food and Drug Administration were brought. The consent decree results in all actions in the matter being terminated.

The consent decree is quite a lengthy document. However, it is important for at least two reasons: 1. It sets forth very clearly just what claims can be made for vitamin and mineral combinations, and what claims are prohibited. 2. It indicates how the Food and Drug Administration proposes to deal with manufacturers or distributors who sell their products directly to consumers by means of sales agents calling upon housewives.

While it was difficult to understand just why the Food and Drug Administration indulged in action described by a three-judge Federal Court in Washington, D. C., as arbitrary, capricious, oppressive, unreasonable, illegal, and so forth, it would appear that the FDA had undertaken to set a pattern by which it could exercise control over those products which do not move through the normal distributive channels for products of this kind. However, the FDA soon found out that it had not taken on a "fly-by-night", but a substantial company with a real product of excellent quality, very well packaged and adequately and properly labeled so far as the package was concerned. The final result was that the consolidated libel proceedings were not tried before the court, but a consent decree was drawn up and signed by both parties. Also a stipulation was drawn up as to the disposition of the packages of Nutrilite seized, which, because of the time which has elapsed since their seizure, may have become below their label potency and therefore may be unmarketable. It was agreed in the stipulation that the goods seized be delivered to appropriate charitable institutions in the districts in which the seizures took place, for use of the inmates of these institutions, with an explanation that they may be below label potency.

The action was brought against Mytinger & Casselberry, who are the sales agents for the Nutrilite Food Supplements produced by Nutrilite Products, Inc. The agents of Mytinger & Casselberry call upon housewives, leaving with each of them a copy of booklet entitled "How to Get Well and Stay Well." They call back at a later date to see if the housewife has read the book, and,

if she has, they try to interest her in buying the product. The product is packaged so that it contains a month's supply of vitamin capsules and mineral tablets, and it sells for $19.50. One capsule and three mineral tablets are to be taken twice a day, and therefore the package contains 62 vitamin capsules and 186 mineral tablets.

In controlling the labeling of a product distributed in this manner, the Food and Drug Administration seeks to control the literature and even the statements made by all the sales agents calling on the housewives throughout the country. Therefore the consent decree perpetually enjoins all agents and distributors of the company from introducing or delivering into interstate commerce any of the Nutrilite Food Supplements accompanied by the following printed matter, or matter to the same effect:

"How To Get Well and Stay Well"—any edition; "Sales Manual—Nutrilite Food Supplement"—any present and past editions; "Agent's Manual"—any present or past editions; "The National Malnutrition" by D. T. Quigley, M. D.; "Man Alive, You're Half dead!" by Daniel C. Munro, M. D.; "You can Live Longer Than You Think" by Daniel C. Munro, M. D.; "Nutrilite News"—any past issue; "Southern California News," any past issue; "Modern Miracle Men" by Rex Beach, S. Doc. No. 264, 74th Cong. 2d Sess. (1941)—M. & C. Reprint No. 1; "We Feed Our Hogs Better Than Our Children" by Fred Bailey, *American Magazine* (October, 1947), M. & C. Reprint No. 2; "Nutrition and Pregnancy" by Bruce Bliven, reprinted from *Ladies' Home Journal* (November, 1947), M. & C. Reprint No. 3; "The Miracles of Dr. Spies", by Dickson Hartwell, reprinted from *Colliers* (January 31, 1948), M. & C. Reprint No. 4; "Vitamins Are Not Drugs!" by Dr. Simon Benson, reprinted from *The Apothecary* (June, 1946) by Lee Foundation for Nutritional Research, M. & C. Reprint No. 5; "The Latest on Vitamin Pills" by Clarence Woodbury, *Woman's Home Companion* (January, 1949), M. & C. Reprint No. 6; "What Makes You Healthy?" by Winifred Raushenbush, *Ladies Home Journal* (March, 1949), M. & C. Reprint No. 7; "Bangs Disease and Undulant Fever Are Due to Nutritional Deficiencies" by J. F. Wischhusen, *American Feed and Grain Dealer*, Minneapolis, Minnesota, (July, 1948), M. & C. Reprint No. 8; "A Practical Way to Avoid Malnutrition" by Royal S. Lee, Lecture delivered at American Academy of Applied Nutrition, reprinted by Lee Foundation for Nutritional Research (April 17, 1948), M. & C. Reprint No. 9; "Quotations on Vitamins", M. & C. Reprint No. 10; "Are We Starving to Death" by Neil M. Clark, reprinted from *Saturday Evening Post* (1945); "Health Is On The Downgrade" by Henry Trautman, reprinted from *Life Today* (December, 1949); "'Food' For Thought" by Rev. Henry Retzek, reprinted from *Priest Magazine* (December, 1945); "Living Should Be Fun" by Carlton Fredericks; "Your Career as a Nutrilite Distributor"—past issues; "Your Body Will Thank You"; "What's Wrong with You?" "Fun After Forty"; "Carl—Answers Some Questions"; "Health From the Ground Up"; "NutriLife, Vol. I, No. 1, Give Your Body a Chance"; "NutriLife, Vol. 1, No. 2, Arthritis and Nutrilite"; "NutriLife, Vol. 1, No. 3, What's Wrong with You"; "Success Course Number 1—the Sales Manual"—past issues; "Success Course Number 2—The Quigley Quiz"; "Success Course Number 4—Health From the Ground Up"; On the Other side of the Fence", (Film—in its present form).

Provided that any information derived from the foregoing publications used in devising new labeling shall not be prohibited if it conforms to all of the provisions of the Federal Food, Drug, and Cosmetic Act.

Further no printed matter may accompany the Nutrilite Food Supplements when introduced into interstate commerce which indicates that the product is effective to prevent or adequately treat or cure any of the following diseases and conditions:

Arthritis, rheumatism, high blood pressure, abnormal blood count, Buerger's disease, cancer, leukemia, tumor, cerebral hemorrhage, stroke, apoplexy, diabetes, deafness, infection of ear, middle ear disease, astigmatism, cataract, near-sightedness, gall bladder trouble, hemorrhage connected with menopause, premature menopause, dysmenorrhea, prostate trouble, impotence in males, sterility, uterine cramps, uterine hemorrhages, angina pectoris, coronary occlusion, coronary thrombosis, heart disease, hypertensive heart disease, rheumatic heart disease, infantile paralysis, poliomyelitis, cystitis, kidney congestion, kidney stone, nephritis, pyelitis, cirrhosis of the liver, hepatitis, sclerosis of the liver, multiple sclerosis, palsy, paralysis, Parkinson's disease, scarlet fever, measles, meningitis, pneumonia, smallpox, ulcers (duodenal, peptic, stomach, gastric), varicose veins. . . Nothing shall prohibit . . . selling or offering for sale Nutrilite Food & Supplement solely as a food supplement to supplement or fortify the diet of any person who may have any of the diseases or conditions mentioned above.

The following claims are forbidden:

1. There is only one major disease and that is malnutrition; and every ailment or affliction which the public is currently suffering or to which they may become heir is directly traceable to malnutrition.

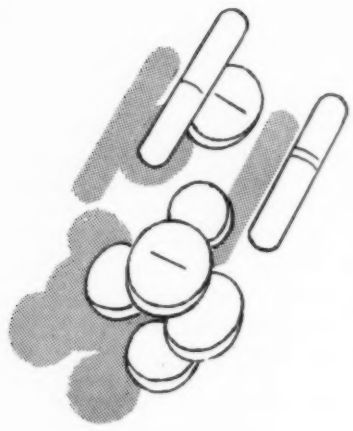
2. Most of the ills and diseases of human beings are the result of chemical starvation of our bodies for vitamins and/or minerals.

3. Physicians are trained in medicine, not nutrition, and are therefore not prepared to accept the proposition that many people's complaints may be, and probably are, caused by deficiencies of micro-food factors; the "medical approach" of doctors in ascribing illness and disease to poisons and germs is old fashioned.

4. When a person has an ache or pain, a weakness, wasting, unsatisfactory feeling, a lesion, a symptom, or loss of physical capacity, in short, when he is ill, he can reason that since his body needs all necessary building and regulating materials anyway, whether ill or well, he will add a vitamin and mineral food supplement to his diet, then he can wait long enough to give the body a chance to rebuild and see if that is all he needs.

(Continued on page 680)

ELIMINATING PRODUCT SUBSTITUTION*



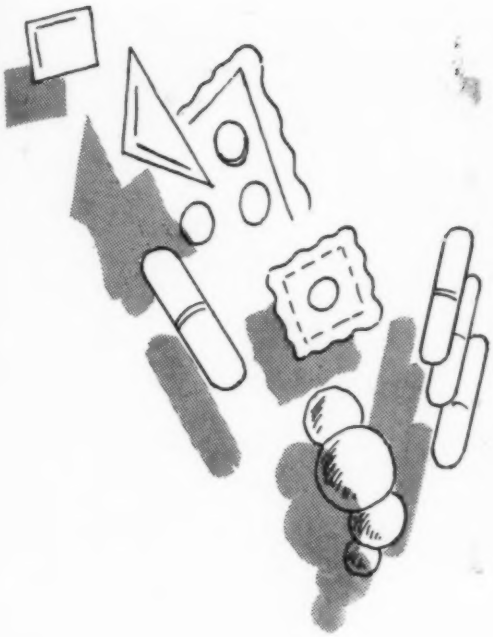
TO START with, let's get a few concepts straightened out. Substitution by the retailer of one drug product for another on prescription is not in itself a complete entity. It does not start and end with the retail substitutor. Although he may wish to substitute on every specialty prescription that comes into his store he cannot do it unless some stinker of a manufacturer has provided him with an imitation to use as a substitute.

Unfortunately, there are lots of such stinkers around —some of whom make the manufacture of imitations their sole business, and some who just make imitations as a side line. Occasionally, a rank imitation is turned out unwittingly by an honest, reputable manufacturer. I know of one such instance where a private formula manufacturer was making an imitation on order from a distributor and had no idea that it was being peddled as a substitute for one of our products. I say to his everlasting credit that he discontinued that practice as soon as we brought it to his attention.

But let us not be naive about this business. Most imitations are knowingly conceived to serve as substitutes on the prescriptions that the specialty manufacturer has worked so hard to pull out of the doctor. It is inconceivable that the many producers of pentobarbital would have all decided independently to produce their product in #4 yellow gelatin capsules. You know as well as I do that Abbott first used that size and color for their "Nembutal." Certainly a light blue #2 capsule is not required to hold amobarbital. I know for a fact that amobarbital is just as stable in a clear capsule and I know that 3 grains can be fitted into a #1 capsule just as well as in a #2. Nevertheless, a lot of guys make it in light blue #2s because that's the way Lilly first marketed "Amytal."

When you get into liver and iron combinations you really see the boys at work. First of all, the imitators made their products look as much like the brown "Lextron" capsule as they could. Then to their surprise Upjohn came along with Ferrated Liver in a green capsule. So the imitators had to add a green capsule to the line. Then Smith, Kline & French decided to get into the parade with a capsule that looked different from them both so now there was a liver and iron preparation incased in a red top and green bottom capsule called "Feosol Plus." When the imitators saw that one move they added a third product colored red and green. You can never accuse the imitation experts of being asleep on the job.

A quick look at the catalogs of the imitators reveals an interesting phenomenon. The prices of imitations, while always less than the well-known product after



By John L. Hammer, Jr.
VICE-PRESIDENT, SMITH, KLINE & FRENCH LABORATORIES

which they are designed, are also always higher than the official USP or NF preparations that may also be used in place of the specialty. I need not comment further on that.

The practice of substitution has been with our industry for a long time. Some 15 years ago when I started at SKF I was horrified to learn that there were at least 20 glycerophosphate preparations available that were intentionally colored the same shade of green as "Eskay's Neuro Phosphates." Let me tell you, that was a helluva shock to one of my tender years. I haven't really recovered yet.

At that time the industry had organized to fight substitutions, but the organization failed because some manufacturers lacked confidence in it and each company was left to its own devices to do the best it could. Our interest in combatting substitution has continued unabated since that time. Shopping surveys over the years from 1935 lead us to believe that substitution on our major products averages around 12 per cent. I might add that this 12 per cent is a very conservative interpretation of our figures, as in Chicago and San Francisco last year it was 23 per cent, in Newark and Pittsburgh it was 38 per cent and in Philadelphia 30 per cent. New York City had 12 per cent and dear old South Bend, Indiana, came up with a perfect score of zero per cent. I wish there were more South Bends. We believe our figures are representative as we have always shopped a cross section of the stores and have shopped lots of them. For the sake of authenticating this, I might point out that we bought over 3000 prescriptions calling for our products in 1950 alone.

I would not have you believe me naive enough to apply this 12 per cent figure to our total business on these products and say that was our loss. Obviously, lots of stores do not substitute and fortunately this is especially true of the store that specializes in prescription business. Let's conservatively assume that these stores represent 20 per cent of the total and do 50 per cent of the prescription business. That leaves the remaining 80 per cent of the stores to fill the other half of the prescriptions. Now assume that all the substituting stores are included in this 80 per cent, then by simple mathematics you find that 7½ per cent of your total volume on a substituted product is being lost. That looks pretty big when you think of it in terms of $37,500 on a ½ million dollar product. And remember that 7½ per cent—whatever it is in dollars—on your product is pretty much all gravy as it is the difference between factory cost and your selling price. Your research, promotional and administration expenditures are the same whether you are getting these sales or losing them.

Although the actual dollar loss from substitutions is very important, it sometimes overshadows other equally significant aspects that should not be over looked. One of these was recently brought to light most forcefully when the FDA seized a shipment of an imitation of Ayerst, McKenna & Harrison's "Premarin" which did not contain the active ingredients which it should. Although many imitations do contain adequate active ingredients quite often they do not. When this occurs the patient gets no results and may possibly be seriously injured. The physician, in turn, thinking that the original is to blame (he doesn't know the Rx was a substitute) loses confidence in the product and in its maker. A pretty horible state of affairs all the way around.

Lots of manufacturers have ignored substitution because their men never reported it to them or they were afraid of offending the druggist if they did anything about it. Well, let's look at that for a minute. The average detail man knows little about substitution because the substituting druggist doesn't throw it in his face and because he quite correctly spends most of his drug store time in large ethical stores where substitution is least apt to exist. Furthermore, he's a salesman (you hope) and naturally is spending his time selling rather than snooping.

Now we come to this business of offending druggists by activity against substitutors. I feel certain that the majority of druggists do not substitute and are wholeheartedly against the practice that brings a

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*Delivered at the Annual Meeting of the American Pharmaceutical Manufacturers' Association, Boca Raton, Florida, April 3, 1951.

EWING GALLOWAY PHOTO

COSMETIC DEVELOPMENT

THE SALES of cosmetics in this country have more than tripled within a space of fifteen years. Sales of cosmetics at retail for the year 1935 totaled $280 million, while for 1950 they totaled $870 million. This is a phenomenal growth resulting from many factors. Naturally the major factor in this growth is the sharp increase in the nation's income. Then follow all sorts of reasons such as the increased number of women now employed by business and industry, the increased appreciation of good grooming on the part of many more women as the result of employment, greater time given to social intercourse, education to ways of good grooming through the radio and television, and so forth. But at the same time this multiplication in the sale of the products of the cosmetic manufacturers also, in large measure, stems from the wider variety of products, and the real improvements in products which have marked this era. Certainly, if the manufacturers had not done their share in offering new and better preparations for the users of cosmetics, the industry would not have grown to the great extent that it has.

During recent years progress has ostensibly been made in "cosmetic elegance." This phrase, taken after the time-worn phrase "pharmaceutical elegance," has to do with the physical characteristics, appearance, packaging, and other features of a preparation. It can be said that the physical characteristics of cosmetics in general, which make them pleasing to the eye as well as pleasant and easy to use, have shown much improvement. Marked improvement also has been shown in packaging which is attractive and functional. At the same time, production methods and packaging operations are now of a nature that they can be readily

adapted to a greatly increased use of automatic machinery, so that the plants in which these products are produced are now, in the main, attractive, modern, spotlessly-clean, well organized places which are a credit to the communities in which they are located.

During recent years extensive research has been conducted into the manner in which cosmetics function. Quite complete knowledge of the composition of the skin, hair, nails, and other parts of the body to which cosmetics are applied has been revealed and is available in the literature. Knowledge has also been gained as to the way in which these various cosmetics function on these various parts of the body, and research has also resulted in a long list of cosmetic ingredients being classified as to their effectiveness and safety when used in cosmetics. To this fund of knowledge the industry is constantly adding still more scientific facts concerning cosmetics and their composition. Such organizations as the Scientific Section of the Toilet Goods Association and the Society of Cosmetic Chemists are constantly bringing to light additional scientific data which are being made permanently available in the literature. Organizations of this sort are doing away with the secrecy which surrounded the compounding of cosmetic preparations for a long period of time. As might be expected, a very large part of the newer developments in cosmetic formulation stem from those who develop and market the newer raw materials. For in order to induce the cosmetic manufacturers to adopt a new raw material, the promoter of it must have concrete evidence of its safety and of its effective use in preparations of the type for which he is offering it. This means that he must conduct extensive research work and publish the results of this research as widely as possible.

In addition, there is considerable research work constantly being conducted by cosmetic manufacturers. Generally this work is kept secret unless the companies are able to obtain patents on specific preparations in which case the results of this research become available to the public in this way. Such patents may be obtained on new ingredients for specific uses, as well as on new compositions designed to accomplish new and different results, or the same results in a new and different manner. Patents on depilatories, deodorants, waving preparations, cake make-up, and other types of cosmetic preparations are examples of this sort of thing.

Improvements in formulation of many cosmetics have been along the lines of bringing about more lasting qualities when the preparations are applied. This has been the constant quest of the nail polish manufacturers for a long time, although the time between applications is definitely limited by the fact that the nails grow. The same type of problem has long faced the lipstick manufacturer with the result that there are now appearing on the market lipsticks which will not come off the lips because of rubbing, and which will not come off onto cigarettes, glasses, and other things. These developments represent definite improvements in the physical characteristics of cosmetics which make them easier, as well as more desirable to use. It might be thought that developments of this kind might result in some curtailment of the amount of a specific cosmetic used by a particular individual. However, it must be appreciated that if these individuals were using these cosmetics only on particular occasions, the greater ease of use and the increased lasting qualities will increase their willingness to use them constantly, thus actually increasing the use of them.

Perhaps the many improvements in products for treatment of the hair have been the outstanding development of the past several years. The dramatic development of the home permanent wave, the radical changes in shampoo formulation resulting in "conditioning" of the hair to make it more attractive, as well as the various products developed for tinting the hair, have made hair preparations a most prominent division of the cosmetic manufacturing industry. And these preparations have been accepted by the women of the nation with high appreciation. Women now willingly give more attention to their hair and spend more time on it than before, for the simple reasons that such excellent results are at once apparent.

These improvements in the character of cosmetics which account for better and easier results in the appearance of those using them is only one of the important phases of cosmetic development. Also of prime importance to the industry is the development of raw materials which, when included in cosmetic preparations, really improve the texture and general appearance of the skin. It is mainly in the attempt to improve the condition of the skin that manufacturers are apt to investigate raw materials which are therapeutic rather than truly cosmetic in effect. But when cosmetic manufacturers stray into investigation of this type of raw materials, they are apt to find that their preparations are from a legal point of view, classified as drugs. After all the Food, Drug, and Cosmetic Act defines cosmetics as "articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance."

While this definition does not in any way limit the type of raw materials through which the desired results are to be accomplished, any ingredients which produce a systemic effect because of their absorption into the blood stream in sufficient quantity to bring about such a result, definitely throw the products over into the drug classification under the law. Also any preparations which contain ingredients which affect the normal functions of the body—such as the stopping of the normal flow of perspiration—also are considered to fall within the scope of the drug definition of the act. Thus it will be appreciated that cosmetics must contain only ingredients which, alone or in combination, act only upon the surface of the body, and act upon them only in such a way as to change and/or improve

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DRUG INFORMATION SOURCES*

By Doris J. Lowe

MEDICAL RESEARCH LIBRARIAN, BRISTOL MYERS COMPANY, NEW YORK

THE pharmaceutical librarian is confronted with the problem of locating information pertinent to almost any phase of the pharmaceutical industry. The librarian's searches may vary widely in scope, depending upon the nature of the subject. Not only must we be acquainted with sources of information in the fields of medicine, chemistry, biology, and all related sciences but also with factual data pertaining to the various nontechnical aspects of the industry, such as engineering and business.

The company may be primarily pharmaceutical, proprietary, medicinal chemical, drug cosmetic, or even more widely diversified. It may have one library or several located in the same or different cities. Its library facilities will be an outgrowth of its needs, and therefore will vary in size and scope. If the libraian has an understanding of the problems of the company and knows what developments and experiments are in progress, greater service can be rendered to the company. One with a good technical background and a wide interest in many subjects can be invaluable in securing relevant and timely information. It is not my purpose here to give a complete and extensive bibliography of all available sources of data, but merely to point out approaches to securing the literature and finding these sources of information.

One of the first sources of reference material is the company library. There are several standard texts which may furnish an adequate answer to an inquiry if consulted, and save time and effort before any expensive lengthy search is begun. These books may cover any of the various fields of medicine, chemistry, physiology, biology, chemical engineering, engineering, patent law, business, statistics, etc. The holdings of the library may be small or large, depending upon the needs and the location of the company. Should the company be in a comparatively isolated area, the collection is likely to be extensive, whereas one located in a large city where specialized collections of books and periodicals are available may be relatively small. As a starting point in the selection of books covering medical literature, the librarian may consult "A Handbook of Medical Library Practice," particularly the chapter on reference work written by Eileen R. Cunningham.[1] Equally valuable in this direction is the "Bibliographical Lists for Medical Libraries," compiled by Estelle Broadman.[2] By reading the book reviews which appear in the various medical, scientific, and trade journals, the librarian can select current books, thus keeping the collection up-to-date.

Of the many references available, the following are invaluable sources of information:

"A Manual of Pharmacology and its Application to Therapeutics and Toxicology" by Torald Sollman and published by W. B. Saunders Co., Philadelphia.
"Modern Drug Encyclopedia and Therapeutic Index" edited by Marion E. Howard and published by Drug Publications, Inc., New York, as well as the quarterly supplements to it called "Modern Drugs"
"The Merck Manual" and "The Merck Index" compiled and published by Merck and Co., Rahway, N. J.
"The Pharmacopoeia of the United States of America" distributed by the Mack Printing Co., Easton, Pa.
"New and Nonofficial Remedies" issued annually by the American Medical Association, Chicago.
"Unlisted Drugs" issued monthly by the Unlisted Drugs Committee, Pharmaceutical Section, Science-Technology Group, Special Libraries, c/o Winifred Sewell, E. R. Squibb & Sons, Brooklyn, N. Y.
"The National Formulary" published by the American Pharmaceutical Association, Washington, D. C.
"The Dispensatory of the United States of America" by Arthur Osol and George E. Farrar, Jr. and published by the J. B. Lippincott Co., Philadelphia.
"American Druggist Blue Book" published annually by the American Druggist, New York.
"Drug and Cosmetic Review" published biennially by Drug & Cosmetic Industry, New York.
"Drug Topics Red Book" published annually by the Topics Publishing Co., New York.
"Green Book" issued by Oil, Paint and Drug Reporter and published by Schnell Publishing Co., New York.
"Physicians' Desk Reference to Pharmaceutical Specialties and Biologicals" published by Medical Economics, Inc., Rutherford, N. J.
"The World Almanac and Book of Facts" published by the New York World-Telegram and The Sun, N. Y.
"United States Government Manual" obtainable from the Superintendent of Documents, Washington, D. C.
"Statistical Abstract of the United States" obtainable from the Superintendent of Documents, Washington, D. C.
"The Standard Advertising Register" published by National Register publishing Company, Inc., New York.

The number and type of periodicals in the library varies widely from company to company. However, a diversified selection of periodicals and trade journals permits coverage of the many fields related to the pharmaceutical industry. In addition, material showing progress in the various fields of medicine and science should be filed so that when called upon to locate relatively recent information not available in bibliographic journals, there will be a starting fund from which to expand. A selection of journals such as the following may appear on the shelves of the library:

Advertising Age
American Druggist
American Journal of Botany
American Machinist
Annuals of Mathematical Statistics
Archives Internationales de Pharmacodynamie et de Therapie
Bacteriological Reviews
British Medical Journal
Chemical and Engineering News
Chemische Berichte
Drug and Cosmetic Industry
Drug Trade News
Food, Drug, and Cosmetic Reports
Food, Drug, and Cosmetic Law Quarterly
Hospitals
Journal of the American Chemical Society
Journal of the American Dental Association
Journal of the American Medical Association
Journal of Colloid Science
Journal of Tropical Medicine and Hygiene
Manufacturing Chemist
Modern Packaging
Official Gazette United States Patent Office
Public Health Reports
Soap, Perfumery and Cosmetics
U. S. Navy Medical News Letter

In addition to these journals, there are a number of privately published journals known as "house-organs." In a recent article, David A. Kronick lists a selected list of these publications for bio-medical libraries.[3] A great deal of the information found in these house-organs should be included in the files and therefore worth the time spent in scanning them. An example of some of these are as follows:

Borden's Review of Nutrition Research
Bristol Digest, Bristol Laboratories Inc.
Chemist Analyst, J. T. Baker Chemical Co.
Ciba Symposia, Ciba Pharmaceutical Products Inc.
Frontier, Armour Research Foundation
Lederle Bulletin
Research Today, Lilly & Co.
Scope, Upjohn Co.
Therapeutic Notes, Parke, Davis & Co.
What's New, Abbott Laboratories

As an additional source of these publications, "Printer's Ink" may be consulted. Many of the pharmaceutical houses publish pamphlets covering specialized subjects. These are very often rather complete studies of the literature and include extensive bibliographies. Thus, having material of this sort in the files saves hours of work. The accuracy of these publications varies, and any data used should be checked against the original sources. A file of this material is particularly valuable in terms of competitive advertising. For example, before a company decides to issue a booklet on a special product, literature issued by other companies should be reviewed. This may greatly influence the type and scope of its publication.

None of the forms of the previously mentioned reference material can replace the standard bibliog-

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[3]Presented before the Science-Technology Group, Pharmaceutical Section, at Special Libraries Association Convention.

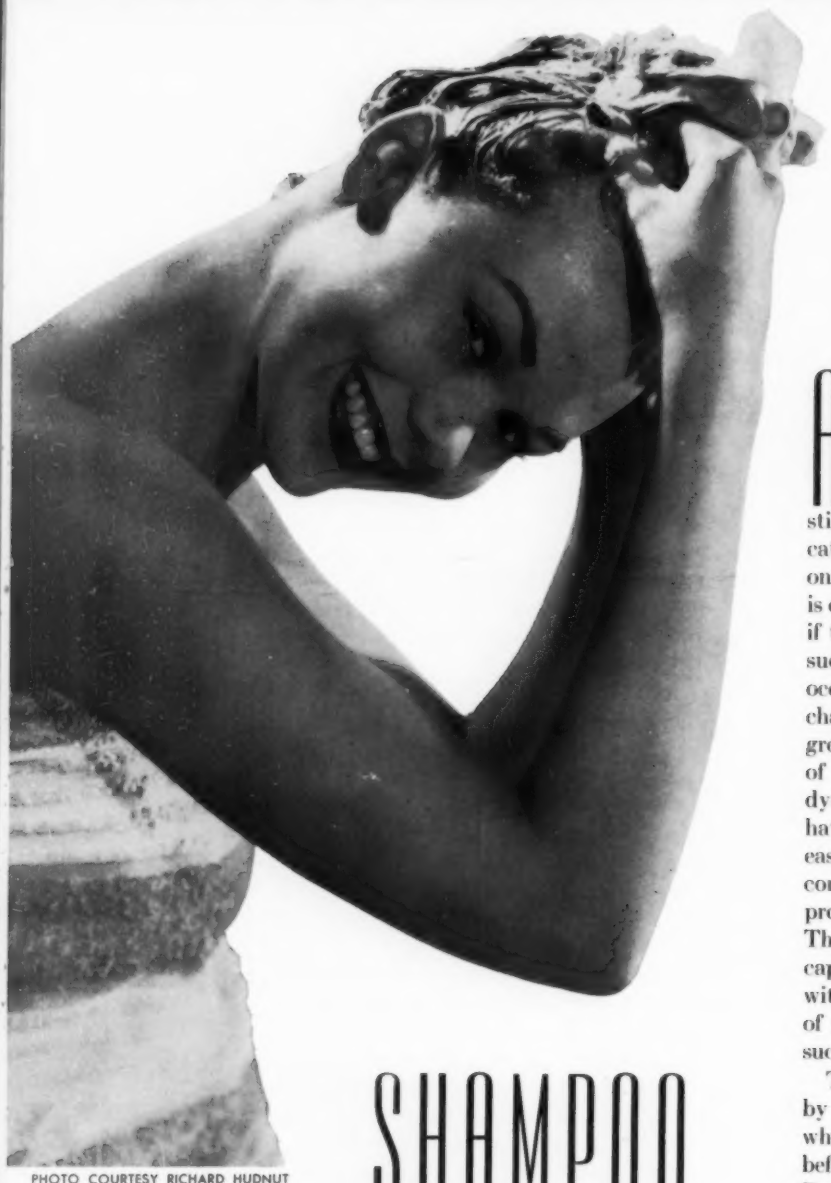

PHOTO COURTESY RICHARD HUDNUT

SHAMPOO TINTS

By Harry Hilfer

ANY hair tinting is dependent on the substantivity of the dyestuffs used, to the protein molecules of the hair. Proteins are generally amphoteric in character since they are possessed of a carboxy group and an active amino group. Their constitution therefore permits them to react with either cationic active or anionic active complexes depending on the conditions. Generally speaking the amino group is capable of reaction with ions bearing a negative charge if the pH is on the alkaline side. Under circumstances such as these, we would expect that a reaction would occur between the amino nitrogen and a negatively charged group such as a dyestuff bearing a carboxyl grouping or a sulfonic acid grouping. The permanence of the dyeing, however, would be dependent on the dyestuffs used. Variations in conditions would also have a tendency to cause the dye to be more or less easily removed by rinsing. As far as protein fibers are concerned direct dyeing from an akaline bath has not proved too effective unless a mordant is employed. The mordant, usually a polyvalent metal, is itself capable of reaction with the carboxy group, and then with the other two valences at its command is capable of further reaction with negatively charged groupings such as the dyestuffs alluded to.

The most prevalent method for dyeing of hair is by the use of *p*-phenylene diamine or related materials which are sold in ammoniacal solutions. Immediately before application, the solution is treated with Hydrogen Peroxide. After application and oxidation of the phenylene diamine by the peroxide the desired hair coloring is produced. The method, however, is rather cumbersome for use as part of a shampoo, though there is no theoretical reason for thinking that it would not work. The use of *p*-phenylene diamine and related compounds, however, is capable of producing the greatest permanence of color.

There is a large market whose interest in hair colorings is limited to a rather ephemeral tint—and is not too concerned about whether or not it will be washed out with the next shampoo. The rather well-known hair rinse compounds have been developed for this market, and appear to be as active as ever. In this application dyeing is done from an acid bath and the link occurs between the carboxy group of the protein and a positively charged dyestuff ion. In order for these dyestuffs to work from such a medium, the chromatographic ion must be positively charged. The field for use in this connection is therefore limited to cation-active dyestuffs.

In the discussion of methods for imparting tints to the hair from coloring matters incorporated in shampoo preparations, we should of necessity examine the various types of detergents that could be used. The most popular type is the anionic detergent—a classification which would include soaps, the alkylaryl sulfonates, and practically all of the sulfated alkyl compounds. These compounds possess the desirable properties associated with a shampoo, perhaps to a greater degree than do detergents in other classifications, and may be used with those coloring agents which are anionic in activity. From a strictly theoretical standpoint, however, we cannot expect as good results from such a medium as from an acidic medium in which cation-active coloring matters are used. Nor can we expect the cationic-active colorants to be too well adapted to a vehicle of this type, because of possible precipitation by the detergent of opposite charge. Perhaps further stressing of the fact that this precipitation is caused by the reaction between two relatively high molecular weight ions which produce an insoluble end product will clarify the nature of this mechanism.

A method of circumventing this difficulty could be found in the utilization of the non-ionic detergents. Either cationic- or anionic-active colorants could be incorporated in such a medium, and if the pH of the system is set at the proper point a better degree of success could be expected. In this connection, advantage could be taken of the better results in general that an acid treatment of the hair lends to its appearance. The sheen can also be augmented by a tinting effect with additions of a cationic colorant, which is easily substantive at an acidic pH. Non-ionic detergents, however, have certain defects as shampoo agents, the principal one being the lower foaming potentialities of these detergents as compared to the anionic agencies. As is well recognized the quantity of suds produced is not necessarily an indication of greater detergency, but that is what the consumer thinks. As a result, shampoo manufacturers are making every effort to enhance the foaming qualities of their products.

Much the same dilemma is found in the use of quaternary ammonium compounds as detergents. In theory we would expect these compounds to be best adaptable as vehicles for colorants cationic in character as a means of tinting the hair. Many of the quaternaries are excellent sudsers and detergents—but are not possessed of these qualifications to the same degree as are the anionic agencies on a cost-performance basis. The manufacturer is now faced with several choices in his development programs which evolve about the question of whether the tint or the shampoo is the more important feature of his product. To achieve a better tint his choice of detergent is limited to those agencies which are not classified as the best choices for shampoos and if he chooses the better shampoo materials, the tinting will suffer.

As desirable as it would be to have the best characteristics of both functions present, my own opinion would be towards enhancing the tinting function, since it would seem logical to expect the consumer to try this type of product because of this added feature, in preference to the shampoo she previously has used. She may also be expected to judge its performance chiefly by the tinting effect imparted rather than from the quantity of suds which she forms during the shampooing operation. It would therefore seem best to choose a shampoo vehicle which would enhance this function to the greatest degree.

Cationic compounds are now in fairly common use as rinses for the hair. Due to their inherent substantivity to proteins at acidic pH's they serve a useful function in soaping the hair strands, so that after a treatment which would otherwise make them feel harsh, they are now made to feel soft and further made more easily manageable. The use of a quaternary ammonium detergent should serve this function as well in addition to doing a good shampooing. It would further serve as an ideal method of incorporation of the colorants to the hair. Hair tints are generally administered by media of rather low pH. The shampoo pH must necessarily be higher because of irritational possibilities if it is lower than pH 5. Good results, however, may be expected at this pH, both insofar as cleansing and substantive coloring are concerned.

As previously stated non-ionic preparations also offer possibilities as good vehicles for tinting. From a cost basis they would probably be preferred to the higher priced quaternaries; there is no reason to suppose that they would not serve the purpose as well at the optimum pH. There are some advantages to the use of quater-

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PHOTO COURTESY RICHARD HUDNUT

MODERN TRENDS IN LAXATIVES

By Milton A. Lesser

ALMOST invariably the average home medicine cabinet contains its complement of laxatives. Very often there will be several such preparations, ranging from the modern cellulose-derived, bulk-forming products to the old fashioned, potent concoctions favored by grandpa. Indeed, so prevalent is the use of laxatives that it may be described as one of the major "drug habits" of the American people.

This point is emphasized by the observation[1] that these products are probably used more than any other class of medicinal compounds. It is further accentuated by information which indicates[2] that at least 30 million Americans take laxatives more or less regularly. To pay for these preparations an estimated one hundred million dollars goes over the drug counters every year. This is probably a conservative figure, since some authorities, like Meiselas,[3] put the annual cost at a much higher level.

Although physicians condemn the indiscriminate use of laxatives, they are recognized as valuable drugs. As pointed out by Steigmann and his associates,[4] the occasional use of a laxative should not be unnecessarily discouraged. Instead, the public should be enlightened about the "when and how" of their rational use. Remarking that laxatives are useful drugs, it is noted that variations in their effect in different individuals and at different times has resulted in the production of a number of such substances each supposedly acting in a different, more optional way.

That there is a needlessly large number of laxatives on the market was brought out by Fittipoldi and Davis[5] in 1948. They reported that something like 150 "different" products were offered to the medical profession by ethical pharmaceutical manufacturers. At least as many, but probably more, were available to the public as patent medicines. Conceding that such drugs are used by many who might fare better without them, these gastroenterologists observe that every day the physician sees patients whom he can keep by prescribing a harmless, effective laxative.

Aside from their extensive use in the treatment of constipation, laxatives have various other therapeutic indications.[6,7] Thus laxatives may be prescribed: (a) Where food or drug poisoning make it imperative to clear the intestinal tract, (b) Following an anthelmintic to free the body of both the drug and the worm, (c) In edema, where saline cathartics assist in removing excess fluid, (d) To induce labor, as when castor oil is administered to initiate uterial contractions, (e) In cases of hemorrhoids or related conditions where soft, smooth-flowing feces avoid irritation. Straining is also avoided, thus obviating another hazard to many patients, notably cardiac cases.

Nonetheless, constipation remains by far the most common condition for which laxatives are taken. Described[8] as a disease as old as history itself, yet called[9] part of the price paid for our modern civilization, constipation is considered[8] to be the abnormal retention of

fecal matter in the intestinal tract or undue delay in discharging feces from the rectum. It refers also to the passage of hard, dry feces.

Constipation occurs very frequently. Thus Schweig[10] cites one gastroenterologist who reported an incidence of 45.2 per cent in a series of 5,000 private patients. He notes, however, that others have found an even higher percentage of constipation cases. Indicative is Thiele's[11] study, which was based upon observations on 3,000 consecutive proctologic patients. His findings showed that 62 per cent of the women and 46 per cent of the men gave a history of constipation. In this investigation, a constipated patient was defined as one who, at some time in life, had delayed stools, passed hard and dry stools, or resorted to laxatives to prevent either of these occurrences.

Bargen[12] of the Mayo Clinic is of the opinion that constipation is probably the most common of all physical complaints. This state, he remarks, usually results from a number of factors, working singly or in combination. Among them are nervous tension, improper dietary and fluid intake, failure to heed the call to stool, lack of exercise, and the abuse of the intestinal tract through the excessive use of laxatives.

Thus, far more than is generally realized, laxatives may play an important causal role in constipation[8,13] as pointed out by Goodman and Golman,[1] the occasional taking of a laxative can hardly be considered harmful, but the continued use of such a drug is to be deplored. They feel that the laxative habit often arises as a result of ignorance of bowel function and movements. Too often people interpret the lack of a bowel movement as indicating the immediate need for a laxative, but often such may not be the case. The absence of a bowel movement over the period of a day is entirely compatible with health in certain persons, just as two or three movements are quite customary in others. It is too frequently forgotten that there are wide variations between individuals and that an individual's pattern may vary with the conditions of exercise and diet.[7]

As with other diseases, the treatment of constipation consists primarily in correcting the underlying factors.[14] The diet should contain sufficient cellulose or "residue" to give bulk to the feces. Fluid intake should be increased and an adequate vitamin supply, especially thiamine and the B complex, should be provided. Exercise is beneficial.[15] The establishment of a proper "habit time" for evacuation of the bowels is an important part of treatment.[1]

Of course, the laxative habit, if present, must be broken. Nonetheless, the judicious use of laxatives is often a very important part of constipation treatment.[15,16] As remarked by McGuigan and his colleagues,[17] "Notwithstanding the statement of some medical writers that the use of laxatives is a 'horrible habit', laxatives have a well-defined place of usefulness in the management of chronic as well as in the relief of temporary constipation."

They further note that the prescribed therapeutic regimen may appear too formidable and time-consuming to be used in a relatively benign though uncomfortable condition. Moreover, the patient's condition may not permit such treatment. Thus, a patient confined to bed by illness can hardly be expected to submit to dietetic and physical measures to overcome his constipation. Advanced age, chronic cardiovascular disease or a pulmonary lesion may form contraindications to dietetic regulation or physiotherapy. Under these and certain other circumstances, "laxatives are not only valuable, but often the only available measure toward the accomplishment of the therapeutic aim."

Others have expressed similar views. While condemning the use of irritant cathartics, many[2,5,12,15] have commented on the usefulness of the more physiologic, bulk-producing, hydrophylic colloid laxatives. Schweig[10] for example, states that for patients who require laxatives, the present trend in prescriptions has been away from the irritant cathartics toward the hydrophylic colloids.

In addition to the natural and synthetic bulk laxatives, various other types of products find use in the treatment of constipation. Not so popular today are the several saline laxatives, as represented chiefly by the magnesium salts. These are often classified as bulk laxatives because they serve to increase the fluid content of the intestinal tract. Still quite extensively used are the emollient type laxatives, which provide a lubricant

(*Continued on page 674*)

WITHDRAWAL of its support of the proposed general antibiotic certification amendment to the Federal Food, Drug, and Cosmetic Act by the American Pharmaceutical Manufacturers' Association was accomplished by a resolution approved by the Association at its annual meeting held early last month at Boca Raton, Fla. This withdrawal was recommended by the joint task force on this amendment composed of representatives of the American Drug Manufacturers' Association, the A. P. M. A., and the Proprietary Association. Association Counsel Charles Wesley Dunn stated that the two other associations will take similar action at their annual meetings. A main reason for withdrawal of support lies in the fact that the Pfizer antibiotic, Terramycin, had been subjected to certification although it had been on the market a full year when this resolution was adopted. Other existing antibiotics have been subjected to certification by special amendments to the Federal Food, Drug and Cosmetic Act requiring that those antibiotics be certified.

The resolution is as follows:

"At its last annual meeting the American Pharmaceutical Manufacturers' Association adopted a resolution approving the policy of a general antibiotic amendment of the Federal Food, Drug, and Cosmetic Act, recommended by a joint task force of the American Pharmaceutical Manufacturers' Association, the American Drug Manufacturers' Association and the Proprietary Association of America.

"This amendment was designed to substitute a "new drug" control over the production of all antibiotics for the "batch certification" control over the production of certain antibiotics now prescribed by this Act. It was recommended on the theory that the plan of the latter control is fundamentally unsound, in important respects, and may be extended to all other antibiotics; and that, for these reasons and from a comparative standpoint, the former plan of control is a preferable one. But it has since developed that there is no public need in fact to place all antibiotics under an advance production control by this Act; and that consequently its amendment for such a broad control is unwarranted.

"*Therefore be it resolved* that the American Pharmaceutical Manufacturers' Association does hereby rescind the above resolution, for the reasons stated. The presently indicated course is instead (*1*) duly to revise the control over the production of certain antibiotics now prescribed by the Federal Food, Drug, and Cosmetic Act, e.g., to provide for their appropriate decontrol; and (2) to examine any proposal for an extension of this control to other antibiotics, on the basis of the facts thus presented."

A resolution was also adopted by the Association condemning the Durham-Humphrey Bill in its present revised form, but pledging support of such a bill if it is corrected in accordance with the views of the Association. This resolution reads:

"Representative Durham and Senator Humphrey

APMA M

Dr. Howard A. Rusk, New York University-Bellevue Medical Center, Receiving Annual Research Award of APMA from Howard A. Fonda, president, right. Dr. Martin Laesersohn, chairman of APMA's research board, and vice-president of Winthrop-Stearns Inc., looks on.

A MEETING

have introduced a new and revised identical bill in the current 82nd Congress, to amend the prescription-drug law in section 503 (b) of the Federal Food, Drug, and Cosmetic Act. The Durham bill is H.R. 3298, introduced on March 19, and the Humphrey bill is S. 1186, introduced on March 21. This amendment is designed appropriately to regulate the filling and refilling of prescriptions for drugs originating in interstate commerce, by pharmacists, in order to safeguard the public health; and to prevent the refilling of a prescription for a dangerous drug, without the expressed direction of a physician. But, as in the case of the prior Durham-Humphrey bill, section 503 (b) is amended in part to empower the administrator of this Act, proceeding through the Food and Drug Administration, broadly to define what drugs are unsafe or ineffective for use unless they are dispensed on a prescription basis. Hence the FDA is thus given a basic control of the drug industry and medical profession, whereby it determines what drugs must be dispensed on prescription and what drugs may be retailed without it; and in doing so the FDA is thus authorized to adjudge the efficacy of drugs, in addition to their safety. Such a government control of the drug industry and medical profession is fundamentally unsound and practically unnecessary. It is unsound because the philosophy of this Act is to establish objective standards for the sale of drugs and not to empower a government determination of their sale, which is the philosophy of free institutions; and because the medical profession, not the government, should adjudge the efficacy of drugs. It is unnecessary because this Act and the regulations thereunder now establish adequate standards for deciding what drugs should be dispensed on a prescription basis.

"*Therefore be it resolved* that the American Pharmaceutical Manufacturers' Association does hereby approve the purpose of the new Durham-Humphrey bill and pledge a support of its enactment, in a form duly corrected accordingly. For the Association is unqualifiedly and unalterably opposed to any provision in this bill which vests the aforesaid control of the drug industry and medical profession in the FDA whereby it thus determines what drugs must be dispensed on prescription and what drugs may be retailed without it, for the reasons stated. And since this provision is fundamentally unsound and practically unnecessary it is not saved by making its exercise subject to the administrative hearing and court review granted by such bill. Furthermore the plan of such court review is in itself fundamentally unsound and impracticable."

Three other resolutions were adopted, the first of which opposed the transfer of the Bureau of Narcotics from the Treasury Department to the Department of Justice for the reason that there is complete cooperation between the drug industry and the Bureau of Narcotics, and also because such a move might result in the creation of a National Police Force, which is opposed by the Attorney General.

The second of these resolutions urges the Italian pharmaceutical industry to limit its manufacture and import of heroin to the actual needs of Italy, which in the opinion of the Drugs Supervisory Body of the United Nations should be about 20 kilos annually instead of the previous annual estimates of 190 kilos. This Italian heroin is the chief cause of the spread in teen-age addiction in the United States.

The final resolution is concerned with the essentiality to our defense effort of personnel of manufacturing pharmacists. It calls upon Selective Service officials to give manufacturing pharmacists the same status as other essential professional groups with respect to manpower allocation and Selective Service deferment.

In his Presidential Address, Howard B. Fonda, of Burroughs Wellcome & Co., recommended that an economist be engaged by the Association to keep the members constantly informed in this field with particular study of how the pharmaceutical manufacturing industry is affected. Said Mr. Fonda: "I know that there are a lot of economic services available but none is devoted solely to the pharmaceutical industry. I am of the opinion that such a service can be developed that will be of great practical value to the membership." A committee to study this proposal was appointed, and will report on the Mid-year meeting to be held in December.

Mr. Fonda also recommended the establishment of two fellowship grants. One of these would be established under the American Foundation for Pharmaceutical Education to assist a pharmacy student in graduate work seeking a higher degree in industrial pharmacy.

(*Continued on page 672*)

TWELVE YEARS OF T

BY STRANGE good fortune—scarcely can we say by foreknowledge or intent—the provisions of the New Drug Section of the Federal Food, Drug, and Cosmetic Act became effective (June 25, 1938) just at a time when drug therapy was undergoing a radical change, when new and powerful agents were being added at a rate not matched in medical history.

Let me illustrate by a rapid recital, with little comment, of the agents added to the armamentarium of the physician in this period of operation of the New Drug Section. All of the sulfonamides, excepting of course the first, fall here. Their tremendous importance was dwarfed almost at once by the antibiotics (of which the end is not yet). New antimalarials, folic acid, Vitamin B_{12}, clinically usable curare preparations, the whole series of antihistaminic agents, synthetic agents for morphine uses, ganglionic blocking agents, antithyroid substances, sulfone derivatives and para aminosalicylic acid for chemotherapy, cortisone, anterior corticotrophic hormone, dicoumerol and similar agents, British antilewisite, ion-exchange resins for medicinal uses, a variety of surface active substances, non-metal containing antispetics—the list is by no means complete.

The details of the definitions and of the provisions of the law are commonplace. Paraphrasing the definition of a new drug as given in the Act, is one not generally recognized by experts as safe for use when used as directed. There are three aspects of this definition which I should like to emphasize: general recognition; experts; safety. The Act does not define general recognition. It does not define experts. It carries no explanation of what is meant by safety. In relation to this last point, it should be kept in mind that the safety for use is qualified by a further expression, namely, safety for use when used as directed.

Since these expressions are not clearly defined, it has been necessary for the Food and Drug Administration to define them administratively. This we have attempted to do on a commonsense basis, remembering always that Congress wrote this Section into the law in the interest of public safety. The opinions we express, the interpretations we adopt, and the actions we take are, of course, always subject to judicial review. Perhaps the opinion we are called on most frequently to express is that regarding "newness" of a new drug within the meaning of the Act. We are always willing to give our views. But, except from the authority that may be accorded our cumulative experience, we have none by virtue of any specific delegation in the Act. If the substance which is subject of the question is genuinely a new chemical entity, as is increasingly often the case, the decision is simple. There can be no general recognition of safety of a product until it has found some use.

THE NEW DRUG SECTION*

By Dr. Erwin E. Nelson

MEDICAL DIRECTOR, FOOD AND DRUG ADMINISTRATION

If a drug, as defined in the Act, is a new drug according to the definition, namely lack of general recognition by experts of safety when used according to directions, then, of course, a new drug application must be submitted. Judging from the subjects of the early applications, there has been a great change in the determination of newness, either by the Administration or by industry, or both, over the years. The first application was submitted Aug. 30, 1938. During the first year 1300 applications came in, in the second, nearly 1400. In the single month of May, 1939 the total reached 190. As competent as the industry is, I do not believe any one credits it with that kind of an output of *new* drugs. The present average rate is about 25 per month. Apparently, in the initial stages when neither industry nor the Food and Drug Administration had any experiences to go on, any new product, that is new for the company producing it, was treated as a new drug, with submission of an application. A cursory review of the early applications reveals, for example, that many of these so-called new products were nothing more than private formulae.

The new drug applications of today then are much more likely to represent genuinely new therapeutic agents. Each application also contains a great deal more material than in the early days. The various requirements of an application are spelled out in the Act (Section 505) and are familiar to most of you. In a sense the specific requirements for the first section (505(b)1) could be said to be the most important, in the sense that until and unless they are met the basic material of an application is lacking. This section requires full reports of investigations made to show the safety for use. While not all applicants today interpret this requirement as we believe they should, there have been very considerable changes since the first years of operation. These changes I believe are in part due to developments in pharmacology, experimental therapeutics, and in experimental medicine. While the recognition of the need for and the development and introduction of quantitative method antedates 1938, there has been a very great development since that time. Proper planning of experiments, methods for obtaining quantitative data on objective findings, appreciation of the necessity for adequate controls, have been recognized to an ever increasing extent. Quite properly, with the development of these new standards for research, those charged with evaluation of a new drug applications have insisted that the evidence therein for safety be measured by these new standards. Manufacturers, with awareness of their research scientists of these developments, have found their own standards *(Continued on page 642)*

*Delivered before American Pharmaceutical Manufacturers Association, Apr 3, Boca Raton, Fla.

Our machine made flint glass bottles are available in a wide variety of sizes and styles. They can be supplied plain or with fired-on ceramic labels. The style illustrated is number C-39. Sizes range from ½ ounce to 16 ounces.
CARR-LOWREY GLASS CO.
Designers and manufacturers of fine glass containers
Factory and Main Office: BALTIMORE 3, MD. • New York Office: 40 W. FORTIETH ST. • Chicago Office: 1572 MERCHANDISE MART

PACKAGING AND SELLING

POINT OF PURCHASE

This year the annual exhibit and symposium of the Point of Purchase Advertising Institute put the emphasis very strongly on motion in displays.

The panel of retailers declared that manufacturers should test displays before forcing them on retailers. This panel made and stressed four points:

1) Pretesting with retailers before quantity production.

2) Simplicity of art and copy.

3) There was about a 50-50 split on whether displays should be permanent or short-lived. Most of the retailers who used outdoor displays wanted permanent fixtures, while retailers who depend on indoor displays favored less expensive and more easily changed fixtures.

4) A greater use of displays that enable customers to handle products. It was emphasized here from experience that unless displays help to make goods readily acceptable to customers the effectiveness of the display is materially lessened.

The Grand Rapids study on the use of point of purchase advertising in food stores by the Progressive Grocer brought out that only 30 per cent of the point of purchase material received by these stores is used and that 70 per cent were thrown out without being used. Retailers gave the following reason for this appalling waste of display:

1) Dealers receive more display material than they can possibly use.

2) Some stores cannot use materials that are useful to others.

3) Deliveries of materials do not always fit in with dealers' plans.

4) Lack of stock to build displays.

5) Material is difficult to use.

6) Material interferes with the movement of merchandise.

7) Material does not do a good selling job.

It was found, however, in these food stores that retailers do make good use of display material when it is right for their stores and in line with their plans. Of the materials used 95 per cent favored cards with easels.

Plus for a Dentrifice

It is reported that one of the leading toothpastes is working on a top secret new ingredient which rumors say will be a form of chlorophyll. Since the deodorant business has been one of the dynamic, thriving growth parts of the entire cosmetic business, and since a very high percentage of the people, both men and women, have been converted to the rather general use of deodorants, it would seem that the inclusion of this appeal in a dentifrice would be a very effective plus.

All Kinds of Advertising

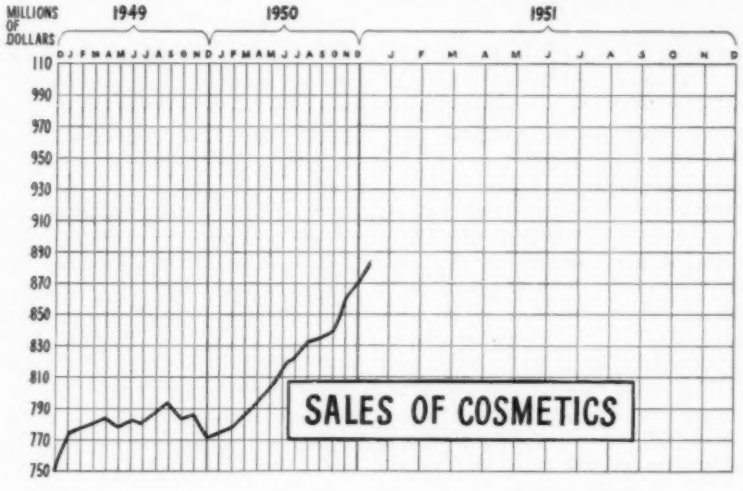
Publication advertising and the publishing business seems to be the victim of a pincher movement by the Government. Hearings to increase the cost of second class postage 100 per cent have been under way in Congress for some time. Now the Congressional Economic Committee has suggested that a "heavy" sales tax on publication advertising might be desirable as a method of conserving paper and checking inflation by reducing consumer buying.

"From a general economic point of view," this Committee said, "one of the most desirable excise taxes that could be levied would be a tax on advertising, especially on that urging consumers to buy consumer goods."

What such a tax might do to the distribution, to the value of trademarks and in fact to the solvency of many manufacturers was not discussed in this report. Government logic seems to be to give consumers a good spanking for daring to want the variety of consumer goods our particular social organization has managed to produce.

From another viewpoint, this determination to soak publication advertisers has an unfortunate and dangerous odor of discrimination about it. As anyone knows in business there are an infinite variety of ways to spend money for advertising other than in paid space in publications. To mention just a few, there are radio and television, direct by mail, point of sale display, posters and signs and a number of varieties of showmanship best illustrated by Hadacol.

Retail sales of cosmetics for the twelve months ended with January 1951 totaled $884,302,000. This compares with $869,591,000 for the twelve months ended with December 1950 and with $770,918,000 for the twelve months ended with January 1950.



If Congress ever fell for this silly suggestion of their Economic Committee, it is very doubtful whether there would be a decrease in advertising expenditures in general or a drop in consumer buying. Advertising would merely select any one of the number of other paths to reach the consumer, some of which would be imaginatively devious.

Some Turnover

The Federal Reserve Bank makes a conservative estimate that some 5 billion checks are written each year. To illustrate the way checks are replacing currency the estimate of the amount of transactions is $1.75 trillion. This compares with the amount of cash floating around of $27 billions, which of course, does a lot of turns on its own account.

Sample Room Showmanship

Maybe showmanship is on the increase in American merchandising and perhaps Hadacol will not have the field so completely to itself in the use of extravagant traveling personal appearance showmanship.

Owen-Corning Fiberglas Corp. are making use of a "roving revue" that will cover 112 cities in America and Canada. This 60 minute show, run by five men, begins with an announcement that several door prizes will go to the holder of every third number pulled out of a hat. A product demonstration follows with a running dialogue that keeps the show "pepped up" through a series of connected episodes. Members of the audience are frequently called on to take part in the demonstration and this is handled in the typical laugh producing radio technique. As an instance of the showmanship in demonstrating Fiberglas insulating wool, B.T. Units are demonstrated with pies, ice cream and coffee.

So far as the cosmetic business goes, the traveling show has never lost its effectiveness. This was one of the primary reasons why cosmetic salesmen organized the local shows which overran the country during the war and which are still impotant key buying occasions in several merchandising centers each Fall. While most cosmetic salesmen have gotten away from the big sample cases and the hotel showrooms, each Fall a considerable number of men leave New York with two to four large trunks on an itinerary of two or three months where a hotel sample room is used to pull buyers into a central show rather than the salesmen going to the buyer.

It is true that sample room selling has been declining except in certain fields where the wide variety of products, styles and numbers make it impossible for the salesman to bring all his samples to the store. Perhaps this new development of showmanship in demonstration will merge in some way with the hotel sample room and bring a new era of selling where the buyer finds sufficient entertainment to go to the seller and where the seller has ample time to display and properly demonstrate merchandise.

B. M. and P.O.P.

Bristol-Myers Company this year is allocating an amount equal to 10 per cent of its advertising budget for point of purchase advertising. This means about 1,500,000 dummy cards, 100,000 counter cards, 50,000 window spots and banners and 250,000 price tickets.

It is company policy to insist that these materials should not be wasted or distributed on a hit-and-miss basis. No point of purchase material goes to a retailer unless he has specifically requested it. To secure these requests the company is sending letters to thousands of outlets describing the display including a photograph and a return post card which the dealer fills out and mails if he wants the display. Business paper advertising and the company's own representatives follow up this mail system.

Canned H_2O

There are all sorts of ways of building a business and making money but not many would think of canning water. And yet this may turn out to be one of the tremendous volume products using cans.

Chemical Service of Baltimore canned water during World War II for lifeboat and aircraft use and is now going into largescale production to repeat this performance. Present capacity of this Baltimore operation is said to be from 75,000 to 100,000 cans a day.

But this is a trifling market compared to the volume which may develop. It was discovered in the Bikini atomic tests that water itself does not become radio-active but that mineral organisms and mineral solids make it dangerous. If all of these organisms and mineral solids are removed and the pure water canned, this can provide safe drinking water in places and areas that might be exposed to atomic radiation of any kind. In addition, as a precaution against any sort of biological warfare, this canned water is, of course, a supply that can carry a community through a critical period.

It is said that the governors of several defense conscious states have already expressed an interest in canned water.

Fight for Whats Left

DuPont's letter to stockholders offers some suggestions as to what is wrong with consumption. This letter deals with the typical family of four in the $8,000 a year income group. According to the letter this family's first big headache is taxes. Federal, state and local taxes are now three times what they would have been in 1941 on the same income basis. They now reduce the monthly income of $666 by $100.

Out of the remaining $566, food takes a $150 slice, because food costs have risen more than 115 per cent since 1941. Even in a family with this income, food accounts for more than 40 per cent of the household budget.

The letter suggests that the middle-class prosperous society which has characterized this country for so many years may be facing declining standards of living in a very similar way to that which is taking place in England.

"For many years," according to this letter, "an increasing proportion of the national wealth has been funnelled toward the wage earner and the farmer while the greater part of the tax load has been shifted to the middle income group."

The suggestion we get from the letter is an explanation as to why so many middle class and white collar families can't buy many consumer goods without cutting down on their food budget.

Can We Do It

Medicine and nutrition are really just getting into swing in animal products with a program for better health, better production and possibly for vastly improved production characteristics on our farms.

We've already seen a few rather startling developments in breeding or hybridization, as for instance, in the new lightweight turkey. What may be possible some day as a development of this three-pronged research of medicine, nutrition and breeding is indicated in two recent newspaper stories.

According to one newspaper account, a hen laid an 8 ounce egg. If we consider that a large size egg runs to 2

WIRZ TUBES

FROM THE SMALLEST TO THE LARGEST

give your product

CONVENIENCE

PROTECTION

SALES APPEAL

Standard sizes from ⅜ x 1½" to 2 x 10". A wide variety of styles and sizes can be engineered in Tin, Aluminum, Lead and Tin-coated Lead.

Write today for your copy of our recently printed folder, "Wirz Collapsible Metal Tubes." It contains useful tube standards and valuable design data.

ESTABLISHED 1836

A. H. WIRZ Inc.

New York 17, N. Y. 50 E. 42nd St. | Chicago 4, Ill. 80 E. Jackson Blvd. | Memphis 2, Tenn. Wurzburg Bros. | Los Angeles 48, Calif. 435 S. La Cienega Blvd. | Havana, Cuba Roberto Ortiz & Son

Export Division—755 Drexel Bldg., Philadelphia 6, Pa.

Collapsible Metal Tubes • Lacquer Linings • Wax Linings • Westite Closures • Soft Metal Tubing • Household Can Spouts • Applicator Pipes • Compression-Injection Molding

2308 W. Townsend St., Chester, Pa.

The Empress closure and smart label combination make Duraglas stock-mold bott'e A-4338 a highly individualized sales package.

MAKE-UP makes the difference!

YOU'LL FIND it's surprisingly inexpensive to give your product sales appeal with expensive looking, but economical stock-mold Duraglas bottles.

Owens-Illinois has more than 1400 different sizes and styles of Duraglas stock-mold bottles to choose from. Our package design specialists at the Duraglas Center can help you create a striking bottle – label – closure combination that's just right for your product.

No matter what the market conditions may be, it doesn't pay to let your package get out of the *habit* of selling.

Duraglas bottles are protectors of quality

TRADE MARK REG. U.S. PAT. OFF.

ounces and a little over, it is evident that this single curious feat, from which it appeared the hen recovered without any trouble, is not an impossible objective.

According to another newspaper story another hen came through with a performance which will probably frustrate the scientists for many years to come. This particular hen laid two eggs a day for 30 days running. This probable all-time record was accomplished by an extraordinary advantage which nature had endowed this lady chicken, that is, she was found to have two orifices.

Easy to Buy

There probably will be a great deal of renewed discussion by retailers about the way in which store shopping hours are not adjusted to the needs of a large percentage of the population. As an increasing number of women re-enter factory employment, this is bound to be a serious question for many retailers in many localities.

Macy's, New York is now experimenting with a telephone service open from 12:30 to 5:00 P. M. on Sundays. Buying on the first Sunday of operation was reported to be quite active.

New Type Evidence

A market research survey has just provided conclusive evidence in a copyright case. Lane Bryant, Inc., a national chain which has traditionally specialized in maternity clothing, contested the right of a store in St. Louis where there is a Lane Bryant branch to the use of the name "Maternalane." The contention of Lane Bryant was that this name infringed upon its own copyright name and caused confusion in the public mind.

Lane Bryant engaged a market research organization to ascertain whether this confusion really existed in the minds of potential customers in St. Louis who might trade in their store. Interviews with women of childbearing age indicated definitely that the names of the two stores as used in advertising caused substantial confusion. About one-quarter of the women interviewed believed that there was some connection between the two organization and a very large percentage were vague as to whether the two organizationss were affiliated in some way. The survey was accepted by the Court as evidence and the judge, in his opinion, indicated that the research project was the most important evidence presented in the case.

Redesigned Packages

Better Brushes, Inc., Palmer, Mass., has re-designed its packages to bring about a greater uniformity in its bottle, label and closure designs in order to establish family relationships between its various products and to provide for easier brand identification. Three of the new packages (top row) are illustrated for comparison with two of the old-style packages (bottom row).

Stock, round toiletry bottles with Applied Color labels are used with the

entire line of toiletry products, including Bubble Bath, Bath Oil, Lemon Shampoo, Deep Skin Clean, Concentrated Shampoo and Skin Balm. Bottles, labels and Empress plastic closures are all supplied by the Owens-Illinois Glass Co.

In addition to its well-known lines of household brushes and toiletry items, Better Brushes also manufactures an extensive line of quality household cleaning aids for which uniform package designs have also been adopted.

Riding High

According to Revlon's new advertising, "More women wear Revlon than any other brand of cosmetics."

In full page advertising in the N. Y. Times, the Revlon headline states: "Go take a Walk" said the cosmetics buyer to the department store president (and believe it or not, he *loved* it!)

This headline is an adaptation of a very potent story that went the rounds a few years ago when the star salesman told the president of his company what he could do with his hat. According to this story, the president didn't love it but after looking at the salesman's record of sales, he decided that he had better follow instructions.

The Revlon theory, as expressed in their advertising copy as to why a store buyer can tell a store president to take a walk, is that cosmetics capture nearly twice as much sales volume per square foot of space as the average sales volume per square foot of space in the rest of the store. Following that, Revlon is the preferred cosmetic brand that is first in prestige and first in volume too—a position no other cosmetic brand holds. It therefore follows that when the name Revlon comes up the store buyer can be pretty independent in bestowing favors on Revlon in store position. Thus the copy.

At the end of this copy Revlon makes the blunt statement that it is now the largest selling cosmetic in the retail stores of America.

How's Your Distribution

It is surprising how few of the well-known national brands really have national distribution. This fact jumps at anyone who makes a careful study of the annual newspaper panels issued by the group of leading dailies which have adopted the Milwaukee Panel Plan.

Now the Scripps-Howard survey shows this in equally clear detail. For instance, out of 7,651 brands reported in 68 product classifications, only 279, i.e., less than 4 per cent, have distribution in the 11 leading markets. Also 5,206 of the 7,651 brands studied have distribution in only one of the markets studied.

There are a lot of ways of looking at this intersting situation. In some industries there are unquestionably very potent local enterprises that have been able to shut out to a major extent some of the big national advertisers. In some cases and in some important groups of retailers, notably the supermarkets chains, the private label brands of the store in certain food categories have been able to win a dominant local position that have squeezed out some of the fringe national brands.

Undoubtedly, some of this weakness is the result of second class selling and second class retail merchandising methods, in certain territories, by the manufacturer.

In spite of the fact that some manufacturers are spending up to a million dollars a year in advertising, the fact is, that a certain specific percentage of this advertising expenditure, usually determined by a circulation analysis as compared to distribution, is being poured on sterile ground. It is rather remarkable that this situation, which

FOSTER • FORBES

Toilet Bottles

FF

FOSTER-FORBES GLASS COMPANY MARION, INDIANA, U. S. A.

SALES OFFICES

KANSAS CITY
DETROIT
CHICAGO
CLEVELAND
MILWAUKEE
CINCINNATI
LOUISVILLE
ST. LOUIS
ST. PAUL
NEW YORK
MEMPHIS
HAVANA, CUBA

is known to these manufacturers, is so readily accepted as one of the ordinary happenstances of business and is not regularly tackled as an appalling waste in their business.

If the president of a large company discovered 20 per cent of his factory space and of his machinery in that space and the employees in that area were practically standing idle over prolonged periods, he would have a fit, and so would the directors. And yet, it must be said that most companies are accepting an exact equivalent parallel in their distribution without too much agitation.

Department of Commerce Monthly Retail Trade Report

Retail sales of all kinds in drug and department stores showing sales for the month of February 1951 as compared with the same period in 1950.

	Department Stores	*Drug Stores*		*Department Stores*	*Drug Stores*
Atlanta	+15	+6	Minneapolis	+10	+5
Baltimore	+14	+18	Milwaukee	+17	+7
Birmingham	+15	+1	Newark	+21	X
Boston	+10	+28	New York	+19	+7
Chicago	+19	+6	Philadelphia	+11	X
Cincinnati	+13	0	Pittsburgh	+25	+13
Cleveland	+21	+14	Providence	+21	+15
Dallas	+8	+1	St. Louis	+10	X
Detroit	+26	+19	San Francisco	+14	+19
Los Angeles	+14	+8	Seattle	+23	+19

Packers Package

Packer's tar soap has a new package replacing the two-piece steel can which has been used for about one-quarter of a century. The problem here is that the soap, which is used occasionally by the consumer, must be stored wet in between applications.

A folding carton made by Robert Gair Co., Inc. has "Foiline" on the outside and laminating glassine on the inside of this reverse tuck carton. This glassine provides the barrier for the wet soap and in addition, the soap will not stick to the glassine.

Druggist—Merchant or Professional

There seems to be plenty of inside pessimism which only occasionally comes to the surface among top leaders in the retail drug trade. Just recently, a retiring chief executive of one chain gave a very gloomy report of the chances for the average drug store to hold on to classes of merchandise which fit easily into supermarket grocery store operations. Another large drug chain has just elected the head of a large grocery supermarket operation to its board of directors which may or may not and probably may have some significance.

The questions that seem to be emerging in the minds of some of these leaders are: Must the drug store move over into a broad operation of its own, or must it adopt political philosophy and join up or merge with the people it can't lick, or must it retreat to a sound basis on which it would be invulnerable, such as prescriptions, medicines and cosmetics?

All of these various avenues are now being explored in some parts of the country. And, of course, it is true that many notable druggists are firmly entrenched in a top location and with a reputation as a real merchant so that they are not particularly perturbed.

In numbers of stores the retail drug trade has reached a plateau and has been practically static for the last ten years, in spite of the enormous increase in consumer wealth and the increase in population.

Now, if many drug stores find that they are particularly vulnerable in tobacco products, candy, toilet articles, magazines and perhaps even, for a future development, the soda fountain, then it will be interesting and perhaps a cruel experience to see what will happen to quite a few marginal retail druggists who do not have a particularly good location, who do not have much capital and who are not very good merchants.

It is going to be highly interesting to see how the various pharmaceutical colleges assess the situation and face up to it. These educational institutions can hardly be immune to the things that are happening to the retail druggist, since there are some reasons besides pessimism and emotionalism to believe that they will be drastically affected.

One of the things that will have to be decided for future drug retailing is which comes first, the merchant or the professional.

Tintair

Bymart, Inc. plans to spend $4,750,000 this year in advertising Tintair. This sum is said to smash all previous records in advertising for the industry. This month the company has planned a promotion in which 10,000 drug stores throughout the United States will have Tintair window displays. According to Phil Kalech, Senior Vice President, the new edition of the Tintair Dealer News will be mailed to 561,000 cosmetic retailers including department stores, drug stores and variety stores.

Tele Mail Order

Television is proving an unexpectedly fertile medium for mail order, so much so that both the FTC and the FCC have jumped into an investigation to make sure that these mail order plugs are in the public interest.

Bigger Plastics

In a small mid-west town a new 300 ounce injection molding machine is just going into operation. This machine now makes possible large size plastic products in the washing machine, television, cabinet and appliance industries.

Fifteen years ago, the largest size machine in the industry was only 4 ounces. Capacities gradually increased to 6 ounces then to 8, 12 and 24 ounces. By 1949 the largest injection molding machine in operation was 60 ounces and only six months ago a 200 ounce machine was put into production for the first time.

The plastic industry, so important now in America and holding so much promise for future industrial development, is already establishing the kind of a production record which has made American business such a unique, dynamic development.

Advice to Druggists

According to Frank H. Head, Vice President and Merchandising Director of United Cigar-Whelan Drug Corporation, the cost of meeting food chain competition directly in many non-prescription items will be prohibitive. Frank Head, who will retire in June after 47 years in the drug business, believes that the best opportunities of the druggist for meeting his competition is by stressing the prescription and cosmetic divisions.

Another job for Crown Closures

protecting absorbable surgical dressings

It is essential that the utmost care be taken to assure the sterility of Johnson & Johnson's HEMO-PAK Oxidized Cellulose Hemostatic Absorbable Gauze Packing Strip. By using Crown Closures with specially developed liners, the manufacturer is assured a safe, dependable seal right up to the time the package is opened. As an additional precaution, a cellulose outer-seal is applied to the top of the package.

When you come to Crown for your closure needs—as so many drug packers do—you'll find the closure and liner that is *scientifically* correct for your product.

Don't take a chance on closure satisfaction. Take advantage of Crown's sealing experience and laboratory facilities . . . they're yours for the asking. Crown Cork & Seal Company, Baltimore 3, Maryland. *World's Largest Makers of Metal Closures.*

Johnson's HEMO-PAK Oxidized Cellulose Hemostatic Absorbable Gauze Packing Strip is one of several absorbable surgical dressings made by Johnson & Johnson, New Brunswick, N. J. and Chicago, Illinois.

CROWN CLOSURES

Approved by millions of housewives

NEW PRODUCTS AND NEW PACKAGES

ABBOTT LABORATORIES have announced the preparation of two new products for veterinary use, Duozine Sodium 10 per cent Solution for intravenous application, and Truozine (Meth-Dia-Mer-Sulfonamides, Abbott). The Duozine product is a sterile solution of sodium sulfadiazine and sodium sulfamerazine and is for the treatment of cattle, horses, sheep, goats, and swine in conditions caused by organisms susceptible to these sulfonamides.

Truozine tablets contain sulfadiazine, sulfamerazine, and sulfamethazine, and may be administered in any case of acute bacterial infection in which the component drugs are specifically indicated. The incidence of crystalluria is low because of the urine solubility factor.

THE BAYER CO. DIVISION OF STERLING DRUG INC. has introduced a new counter display for Bayer aspirin in the form of a sparkling red and yellow collapsible cardboard merchandiser which holds a dozen 100-tablet bottles.

HAZEL BISHOP, INC. has introduced a lighter shade of no-smear lipstick, Pastel Pink," which is expected to be particularly popular among those with blonde hair and deep tan complexions. The lipstick will sell at $1.10 plus tax.

DAGGETT & RAMSDELL, INC. has prepared two new cosmetic items especially for Arthur Murray, an Arthur Murray Cologne Deodorant and a soothing Magic Step Foot Lotion. The cologne is equally pleasing to men and women and is an efficient deodorant as well as a refreshing body cologne. The foot lotion makes dancing and walking a pleasure because of its soothing and cooling action on tired, aching, burning feet. Its non-greasy and fast drying properties permit the sheerest hose to go on easily, without snagging.

DEB COMPANY has packaged three fragrances of Deb air refreshant (spice, pine, and bouquet) in an unbreakable Plaxpak polyethylene bottle furnished by Plax Corp. The bottles have an insert plug with a small orifice which permits the refreshant to be dispensed by squeezing the bottle.

DERMETICS, INC. will promote Mist, Charm of the Redwoods, beginning with June 1st and continuing through the summer, when a complimentary ½-ounce purse size will be given away with the purchase of each dropper-top bathroom bottle (2 ounces).

MAX FACTOR has substituted a plastic bottle for the former glass type which was used as a purse dispenser of hand lotion. The Plaxpak bottle which is one-half inch in diameter and two and three-quarters inches high, is a lightweight and unbreakable container that is proof against handbag accidents. It is encased in a gold-finished metal container, slightly larger than a lipstick container and holds a week's supply. It is equipped with a dispenser that delivers globules of lotion when tapped on the hand. The dispenser cap can be unscrewed for refilling.

GOLD LEAF PHARMACAL CO., INC. has released Sodium Gentisate, Gold Leaf, a new ethical preparation in tablet form for the treatment of rheumatic diseases. It is said to be more effective and less toxic than salicylates and has the advantage of eliminating such side effects as deafness, ringing in the ears, extreme gastric disturbances and lung edema which often result from the prolonged use of salicylates.

LAKESIDE LABORATORIES are distributing Ferrophyll, a new hematinic for rapid and sustained therapeutic response in hypochromic or secondary anemias. The product is available in bottles of 50 tablets and is administered in a dosage of one tablet three times daily.

PARFUM L'ORE, INC. is offering Silkmist, a new hairdress to beautify and control the hair. The product is not a lacquer; it dries instantly, adds body to soft limp hair, adds high luster, leaves no stickiness or flakiness, and rinses right out. It is available in transparent tones of blue, golden red, ash blond, auburn, chestnut brown, and neutral.

THE S. E. MASSENGILL CO. recently added three new products to its line of pharmaceutical preparations. Obedrin Tablets fulfill the requirements of modern treatment of obesity and contain those amounts of B-complex vitamins which will supply a sufficiency of vitamins for daily requirements, even with a restricted diet. At the same time, the amount is kept within balance so as not to stimulate the appetite.

Syrup Lumbricide is a powerful vermifuge for roundworms, the laxative ingredients of which are usually sufficient for treatment. They may be supplemented by a saline laxative an hour after the last daily dose.

The third product, Tablets Khelisem, is a potent coronary dilatory, which causes a dilation of the coronary arteries reported considerably greater than the dilating activity of aminophylline.

"It's a fact...

These caps are so attractive they actually help sell the product"

and they STAY that way, Miss

HARD, SCRATCH-RESISTANT COATINGS. Bright, sparkling colors for instant sales appeal. Handsomely lacquered or lithographed to suit your requirements.

Yes, behind-the-counter saleswomen praise the eye-appealing displays—and the fast sales—they can make with products using MeritSEAL. They know how often women are swayed by the appearance alone of a particular package. Everyone who knows MeritSEAL agrees. Cosmetic manufacturers know how it complements and enhances their product. Production men know it can be depended on for trouble-free performance on the production line. And of course, the women who buy it love it . . . for its smooth, trim lines . . . smart, glistening colors . . . and its distinctive look and feel of luxury. See for yourself how really attractive and efficient MeritSEAL is. We'll be glad to send full information and samples. Simply state your color preference and sizes needed for your product.

SIMPLE, EFFICIENT CONSTRUCTION. Liner and thread are inserted into a sheet metal shell. The thread holds the liner in position, and the lower edge of the shell locks the thread in place.

PATENTED THREAD DESIGN. Spins on freely. Forms a perfect-fitting seal, but won't "freeze" to container. Only MeritSEAL has this exclusive design.

RANGE OF SIZE, COLORS AND LINER MATERIALS. 12 standard sizes ranging from 48 mm. to 100 mm. Special sizes can be ordered. Choice of various liners to suit your needs.

CROWN MeritSEAL

CROWN CORK SPECIALTY CORP.

Division of Crown Cork and Seal Co.

ST. LOUIS 15, MISSOURI

Main Office: St. Louis, Mo. • Chicago: 401 W. Ontario Street

New York: 60 East Forty-Second Street • Western Representative: Western Crown Cork & Seal Corporation . . . San Francisco . . . Los Angeles

New Products and New Packages (Continued)

A. D. McKELVY CO. has introduced a new solid after-shave lotion, Groom-Stick, which contains Seaforth's fragrance of Heather 'n Fern.

NORTHAM WARREN CORP. has added a new shade of nail polish and lipstick to the Cutex line for late spring and summer promotion, a bright blue-red, called "Sugar Plum." The polish will be available in the new Spillpruf bottle at 15c and in the clear-plume capped Nail Brilliance bottle at 25c. The harmonizing Sugar Plum lipstick will sell at 49c for the regular size and 29c for the purse size.

HELENE PESSL, INC. has repackaged its Little Lady Deb line of toiletries, designed for children between eleven and fifteen years old. The chief redesigning feature has been the conversion from folding cartons to set-up boxes for more appealing display pieces.

A perfume-topped daisy is attached to the top of each Little Lady Deb bottle. The yellow core of the daisy is filled with concentrated perfume and can be detached and worn on the lapel as a boutonniere, or carried in the purse as a convenient "freshening up" aid. Included in the Little Lady Deb line are the four-ounce Bubble Bath bottle at $1; Hand Lotion, $1; 3½-ounce bottle of Toilet Water in a plastic spray bottle, $1.50; two-ounce bottle of Toilet Water, $1; Twin Set of Toilet Water and Sachet Powder, $2.25; Soap Mitt of terry cloth filled with soap, $1; and Bath Set including a four-ounce bottle of Bubble Bath, a four-ounce bottle of Toilet Water, and the Soap Mitt, $3.25.

PITMAN-MOORE CO. has prepared two new products, Tablets Alcetin and Gerone. The tablets, which contain dextro-amphetamine sulfate, acetophenetidin, and acetylsalicylic acid, are indiacted for the relief of pain in a wide range of conditions, such as phlebitis, bursitis, headache, sinusitis, neuralgia, myalgia, neuritis, toothache, arthritis, and dysmenorrhea, and for suppressing the fever associated with infections.

Gerone is a palatable antidepressant nutrient containing B vitamins and dextro-amphetamine sulfate and is useful in psychic fatigue, mental depression, malaise, muscular weakness, neurasthenia, and general nutritional inadequacy.

SCHERING CORP. has offered Methostan, brand of methandriol, a new product for retarded growth and constitutional diseases accompanied by protein wastage when such conditions do not respond to diet or to more specific therapy.

SCHIEFFELIN & CO. has announced a new dosage form of Benzestrol, a tablet containing 1 mg. Benzestrol and 16 mg. phenobarbital. This combination in one tablet is said to offer the physician the following advantages: an adequate dose of estrogenic material for the great majority of menopause cases with the advantage of virtually no incidence of side reactions, a calming effect, and economy to the patient since only one prescription is necessary rather than two.

Correction: In the February issue Penicombisul Tablets were erroneously attributed to Organon Inc. This product was recently introduced by Schering Corp.

SHARP & DOHME INC. has released Cremomethazine, a cherry-lime-flavored suspension of soluble sulfamethazine for systemic and urinary tract infections, and Sulfamethazine, a soluble, effective systemic sulfonamide in tablet form. Each 30 cc. of Cremomethazine contains 3 gm. of sulfamethazine, reduced to a fine state of subdivision which insures rapid absorption into the blood stream. One 5 cc. teaspoonful is equivalent to one 0.5 gm. Sulfamethazine tablet.

HENRY K. WAMPOLE & CO., INC. has introduced Sedorzyl, a new prescription preparation for relief of respiratory congestion. It is specifically indicated for symptomatic treatment of mild asthma, allergic seizures, hay fever, chest colds, tracheitis and bronchitis. For the patient with respiratory congestion, Sedorzyl provides prolonged, satisfactory relief and unobstructed breathing through the alliance of an effective liquefying expectorant, Organidin, a bronchodilator and respiratory stimulant, ephedrine, and a mild sedative, phenobarbital, to offset the side effects of ephedrine.

WHITE LABORATORIES, INC. announces the availability of Aquasperse Vitamin A C D Drops. It disperses quickly in water, milk, fruit juices and other aqueous fluids, and is indicated for patients who do not tolerate natural sources of Vitamin C, and for those who suffer allergic reactions to oil-soluble vitamins derived from fish oil sources. It has a mild citrus flavor, free from any oily taste.

WINTHROP-STEARNS INC. has discontinued the smaller 0.25 gram Milibis tablet and introduced a new 0.5 gram size in order to facilitate its administration by reducing the number of tablets required in the treatment of amebiasis. The new tablets are being distributed in bottles of twenty-five.

*Fully protected by U. S. Patent 2,491,947. Foreign patents pending.

a patented* method for printing polyethylene bottles

Color engraving — Hot stamping Patented Process — Exclusively ours!

Assures a permanent, colorfast, debossed, color wiped-in effect on polyethylene bottles, to a high luster.

Alcohol proof — cannot rub off.

Superior reproduction facilities for 250,000 per day.

All colors including gold and silver.

Registers to the utmost detail, flat or design motif.

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Modern Art Printing Company

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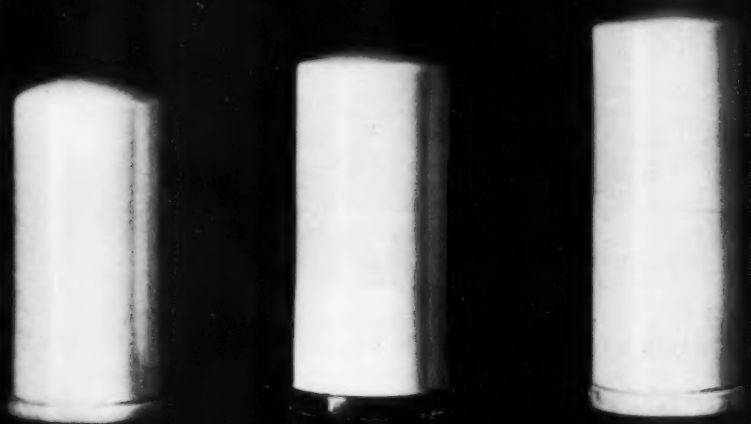
FIRST *for*

METAL AND PLASTIC CONTAINERS
AND SPECIALTIES

BRASS IS OUT!

AN ORDER TODAY IS YOUR CONTAINER INSURANCE



PLASTIC SWIVEL AND PUSH-UP LIPSTICK CONTAINERS
(SHOWN ACTUAL SIZE)

FREE WHEELING
SWEAT PROOF

PRECISION MADE
LOCKTITE

CALUMET MANUFACTURING CO., INC.

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Sam Schwartzman
President.

NEW YORK (17), N.Y.
MUrray Hill 8-4270

For People On The Go

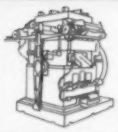
products in Plaxpak bottles are the answer to better living out of a suitcase. Almost as light as a puff of smoke, Plaxpak bottles help take the "lug" out of luggage. Unbreakable—they bounce but don't break—these amazing bottles are immune to the accidents and abuses of travel. They can be thrown or squashed into bags without fear or favor. No wonder products in Plaxpak bottles are applauded—and bought—by an ever growing number of travelers.

Only the best is

OTHER EMHART PRODUCTS INCLUDE:

AUTOMATIC PACKAGING EQUIPMENT
STANDARD-KNAPP
Division of Emhart Mfg. Co.
PORTLAND, CONNECTICUT

GLASS MAKING MACHINES
HARTFORD-EMPIRE CO.
Division of Emhart Mfg. Co.
HARTFORD 2, CONNECTICUT



HIGH SPEED AUTOMATIC PRESSES
HENRY & WRIGHT
Division of Emhart Mfg. Co.
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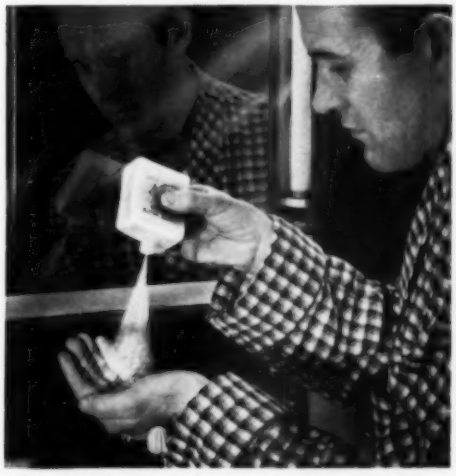
PREMIUM QUALITY STAMPING PRESSES
THE V & O PRESS CO.
Division of Emhart Mfg. Co.
HUDSON, NEW YORK

For Beautiful Hair Breck supplies three famous shampoos in Plaxpak bottles with a diamond point finish. Users like the bottle because it won't break; neither will it chip nor mar porcelain surfaces.

For Beautiful Hands girls find it wonderfully easy to apply World of Beauty Hand Lotion by Max Factor Hollywood. A squeeze of the Plaxpak bottle provides a controlled amount of lotion.

For New Economies in display packaging, Paris Box Co. is making transparent set-up boxes of Plax Polyflex*. Corners are formed without adhesives or heat-sealing. High strength of Polyflex* permits use of light gauges.



For After-Shave Comfort men like the clean, masculine scent of Chessmen After Shave Powder. They also like the easy dispensing provided by the handsome, unbreakable Plaxpak bottle.

good enough

HELPFUL PLAX LITERATURE
Catalogs on Plaxpak bottles and other Plax products are available on request. Also available is a booklet "Fabrication of Polystyrene."

PLAX
FOR PLASTICS
NOT SUBSTITUTES: IMPROVEMENTS

PLAX CORPORATION
Subsidiary of Emhart Mfg. Co.
P. O. BOX 1019, HARTFORD 1, CONN.
In Canada, Plax Canada, Ltd., Toronto
Sales Offices: New York City, Syracuse, Philadelphia, Cincinnati and Chicago.

Plax blow-molded products are made under the following U. S. Pats.: 2128239, 2175053, 2175054, 2230190, 2260750, 2283751, 2349176, 2349177, 2349178, 2230188. *Reg. U. S. Pat. Off.

New Perfection
DROPPING PARTS
Simplify Your Packaging Problem

#1

Non-rolling, extra-depth, Bakelite cap; thick-flange rubber bulb; Saftee-ball glass.

#3

Regular plastic cap; thin flange rubber bulb; semi-blunt glass.

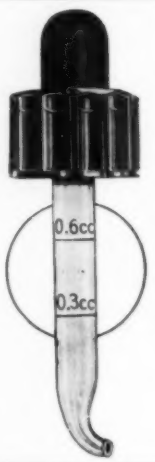
#4

Metal cap; oil-resistant Amekine synthetic rubber bulb (without strong odor); blunt glass.

The wide variety of sizes, styles and colors in New Perfection's complete line of dropping parts offers the answer to your packaging problem. Each component part is designed to present and administer your product in the most attractive, convenient manner. We supply dropping parts to fit your bottles or furnish the complete unit.

DROPPER GLASSES CAN BE CALIBRATED IN COLOR

An inexpensive extra that adds great convenience to the use of your preparation. The dosage you desire in the color you specify is accurately and permanently printed on the dropper glass. Trade-marks and firm names can also be imprinted.



#2

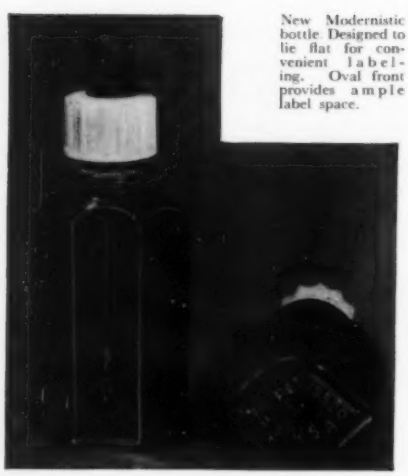
Non-rolling, extra-depth Bakelite cap; thick-flange rubber bulb; special bent glass, plain or CALIBRATED.

RUBBER BULBS are supplied in many styles and colors. Oil-resisting AMEKINE synthetic rubber is used for oil preparations; natural rubber is supplied for other products.

CAPS of plastic or metal can be furnished in a complete range of sizes and colors.

DROPPER GLASSES are available in a wide variety of styles and sizes; plain or CALIBRATED in any color to mark specific dosages.

BOTTLES in an attractive modernistic style in Amber, Blue, Green or Clear glass are available, with dropping parts, in the following sizes: 2 cc, ⅛, ¼, ½, 1 and 2 oz.



New Modernistic bottle Designed to lie flat for convenient labeling. Oval front provides ample label space.

Write for Samples and Quotations

PENNSYLVANIA
GLASS PRODUCTS CO. INC.

"Glass'Goods of the Better Kind"

430 N. CRAIG ST. • PITTSBURGH (13), PA., U.S.A.

Need Any of These?

If you need any of the pharmaceuticals shown (listed in the coupon), or would like special ones developed, inquire of Scovill . . . suppliers to the United States Government in every emergency since 1802.

In times like these, Scovill's Drug and Cosmetic Container Division has facilities to develop and fill vital demands.

SCOVILL-MADE *Containers*

A PRODUCT OF SCOVILL

SCOVILL MANUFACTURING COMPANY
Drug and Cosmetic Container Division
63 Mill Street, Waterbury 20, Conn.

Please send full details of your design and manufacturing facilities. I am interested in:

1 & 2 ☐	Serum Clamps	7 ☐	Pill or Vitamin Carrier
3 ☐	Ether Can Cap & Nozzle	8 ☐	Lip Pomade Container
4 ☐	Band Bail Assembly	9 ☐	Nasal Inhaler
5 ☐	Dispenser	10 ☐	Ethyl Chloride Container
6 ☐	Hypodermic Plunger Rod	11 ☐	Filter Drip Cap

My problem is none of the above, but .....

Name .....

Company .....

Address .....

City ..... Zone ..... State .....

There is a Bright Side

Are the ceilings pinching? With prices for imported oils rising it is still possible to reduce costs with:

SYNFLEUR'S

Bergamotte Artificial,	**Series AB**
Geranium Artificial,	**Series AB**
Lemon Artificial,	**Series AB**
Patchouly Artificial,	**Series AB**
Vetivert Artificial,	**Series AB**

We can supply items in any of the series listed above specifically designed for use in either perfumes, powders, creams or soap.

Yes, since 1889, Synfleur has been serving, and saving money for, the American cosmetic industry. Now, in another difficult period SYNFLEUR RESEARCH is ready.

Turn to Experience for Saving

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Synfleur Scientific Laboratories, Inc. *Monticello, N.Y.*

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MANAGUA • PANAMA • ASUNCION • MANILA • SAN SALVADOR • MONTEVIDEO

NEWS...

Loynd Named Parke, Davis President

Harry J. Loynd, vice-president in charge of domestic and Canadian sales and promotion of Parke, Davis & Co., last month succeeded as president Dr. A. William Lescohier, who retired. Dr. Lescohier, past president of the American Drug Manufacturers' Association, will continue to serve on Parke-Davis' board of directors.

Another change in the top administration of the company included the election of Homer C. Fritsch, vice-president and general manager, to the new post of

HARRY J. LOYND

executive vice-president. Nathan T. Viger, vice-president, will remain as chairman of the executive committee; Cleveland Thurber, vice-president, as vice-chairman; and Mr. Fritsch, as secretary. Mr. Loynd will replace Dr. Lescohier as the fourth member of the executive committee.

The following officers were re-elected: Harold W. H. Burrows, vice-president and controller; Kenneth D. McGregor, secretary and general attorney; David E. Mitchelson, treasurer; Thomas C. Anderson, assistant secretary and general superintendent; John T. Batson, assistant secretary and director of purchases; and John A. Bradshaw, assistant secretary and assistant general attorney.

Elected by Brand Names Foundation

James Hill, Jr., president of Sterling Drug Inc., and George S. McMillan, vice-president of Bristol-Myers Co., were elected to the board of directors of Brand Names Foundation for one-year terms at the sixth annual Brand Names Day last month.

Janssen with FDA

Wallace Janssen, for many years associated with F. D. C. Reports, Washington, D. C., is now associated with the Food and Drug Administration in a new position of Assistant to the Commissioner of Foods and Drugs. Mr. Janssen's work in the FDA will be in the nature of what is termed "public relations" for the agency. Prior to his association with F. D. C. Reports, Mr. Janssen was managing editor of the Glass Packer.

Briggs Heads Pharm. Foundation

Commander W. Paul Briggs has been appointed executive director and secretary of the American Foundation for Pharmaceutical Education, according to Charles S. Beardsley, president of the Foundation and chairman of the board, Miles Laboratories, Inc. He has taken over the position held by the late Dr. E. L. Newcomb, who died last fall. The duties had been performed in the interim by Dr. Ernest Little, former dean of Rutgers University College of Pharmacy.

Orr Becomes Ames Vice-President

George W. Orr, Jr. has been appointed vice-president in charge of sales of the Ames Co., Inc., according to Charles F. Miles, president. Prior to his appointment he had been general sales manager of the Wm. S. Merrell Co. and had previously been associated with the Vick Chemical Co.

Schaefer Awarded Remington Medal

Dr. Hugo H. Schaefer, treasurer of the American Pharmaceutical Association and dean of the Brooklyn College of Pharmacy, will receive the 1951 Remington Medal at a dinner to be given by the association's New York branch this fall.

The past presidents of the association, who selected Dr. Schaefer as the recipient of the award, referred to his unselfish service to the profession during the past 30 years, his leadership in the development of sound educational procedures in American Pharmacy, his outstanding contributions to the work of U.S.P. and N.F. revision, and his contributions to the solution of problems involving food and drug legislation. He was also cited for his public services as chemist to the New York Board of Pharmacy and adviser to health agencies and to the War Production Board in World War II.

Thomas Elected Monsanto President

Dr. Charles Allen Thomas, executive vice-president of Monsanto Chemical Co. since 1947, was elected president of the company on April 24, replacing William M. Rand, who is retiring under the company pension plan.

Sauers with Helene Curtis

Leslie A. Sauers, formerly national field sales manager of the Pepsodent division, has been appointed sales manager of the retail division of Helene Curtis Industries, Inc. This appointment is part of the rapidly developing expansion program, according to George M. Factor, vice-president in charge of the company's retail division, who said that during 1951 Helene Curtis will greatly accelerate sales and promotional activities.

LESLIE A. SAUERS

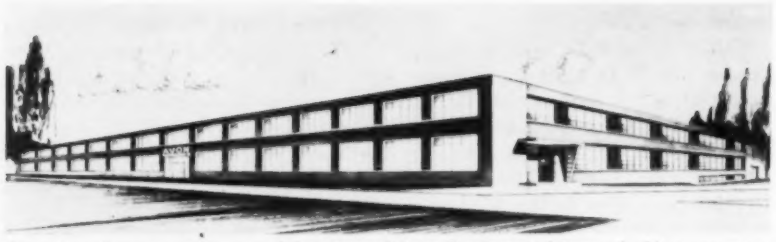
Despres Marks 30th Year with Coty

Jean Despres, executive vice-president of Coty, Inc. last month celebrated his thirtieth anniversary with that firm. A meeting was held in his honor in the executive offices at 730 Fifth Ave., according to Philip Cortney, president.

Stolk Elected Pres. American Can

C. H. Black, president of the American Can Co. since 1949, has been elected chairman of the board of directors, succeeding D. W. Figgis, who retired after being with the company for almost 50 years. W. C. Stolk, executive vice-president, has become president.

Mr. Black joined the company in 1908 as a machine operator and was transferred the following year to the sales organization, becoming a salesman in Buffalo in 1911. After holding a number of sales posts, he was named Atlantic district sales manager in 1931, subsequently advancing to the post of vice-president in charge of sales (1940) and executive vice-president (1943).



Drawing of new manufacturing laboratory of Avon Products in Montreal. Plant occupies 64,000 square feet and has the latest features in equipment and production lay-out.

Avon Opens New Montreal Plant

Avon Products has opened a new manufacturing laboratory at 225 Liege St. West, Villeray Ward, Montreal, Canada. It is one of the most complete laboratories for the research and manufacturing of all types of cosmetics, toiletries, and allied products, according to President John A. Ewald. The private brand manufacturing facilities have been greatly expanded.

The executive offices of Avon Products of Canada Limited are located in the Dominion Square Building under the direction of Charles Bean, general manager. Fred Fusee is production manager of the new laboratory.

New S & D Synthetic Chem. Plant

Production was started last month at the new $1,500,000 synthetic chemical plant at the Sharp & Dohme West Point, Pa. site, which will provide the company with basic ingredients for many of the pharmaceutical products it manufactures for the medical and allied professions. The one-story building contains 24,000 square feet of floor space and has been designed to carry out the modern, efficient, one-level manufacturing plan of the company's West Point plant.

Clymer Heads Phila. A.Ph.A.

Harold A. Clymer, administrator of the research and development Laboratories of Smith, Kline & French Laboratories, was elected president of the Philadelphia branch of the American Pharmaceutical Association at last month's meeting. Additional appointments included those of Dr. Joseph Sprowls, dean of the Temple University School of Pharmacy, as vice-president; Dr. John Ellegood, Sharp & Dohme, secretary; Dr. Eric Martin, LaWall & Harrisson, treasurer; and Professor Linwood Tice, assistant dean of the Philadelphia College of Pharmacy and Science, as the new delegate to the A. Ph. A. House of Delegates.

Volwiler Re-elected Abbott Pres.

Dr. Ernest H. Volwiler was re-elected president and general manager of Abbott Laboratories last month at the annual meeting of the board of directors, following the annual stockholders' meeting. George R. Cain was re-elected executive, vice-president, and Edward A. Ravenscroft, director of engineering, was elected a vice-president. Herbert S. Wilkinson, director of sales, became a director, filling the vacancy made by the retirement of Alfred W. Bays, secretary and general counsel.

Additional officers who were re-elected include S. Dewitt Clough, chairman of the board; Raymond E. Horn, president emeritus; James F. Stiles, Jr., vice-president and treasurer; Ferdinand H. Young, vice-president in charge of production; Charles S. Downs, vice-president in charge of advertising; Edmund L. Drach, vice-president in charge of purchases; Edgar B. Carter, assistant secretary and general counsel; Claud A. Thornburg, assistant treasurer and director of auditing; and George R. Manz, assistant treasurer.

HERBERT S. WILKINSON

May Elected V.P. of Robert Gair

William T. May, Jr. was elected vice-president in charge of container operations of Robert Gair Co., Inc. last month at a meeting of the board of directors, according to George E. Dyke, president.

Health Foundation Project

The Health Information Foundation has launched the first of a series of community studies with a $28,000 grant to Michigan State College, according to Admiral William H. P. Blandy, president of the Foundation. The Social Research Service of the college will begin its work with an invitation to a Midwestern community to study its own health situation, during which the social scientists will advise the people of that community on technical procedures. The college itself has contributed $8,350 toward the project. The community is expected to complete the study by December, 1951, when remedial health procedures will be started. During the next two years members of the research group will make follow-up visits to check the long-term results in health betterment.

The Foundation eventually plans to make additional studies in other parts of the country to determine the effect of regional differences and find progressively better health patterns. Dr. John B. Pastore, executive director, Hospital Council of Greater New York, is chairman of the Foundation's Advisory committee which is serving in a consulting capacity on this research work and future projects.

EDWARD A. RAVENSCROFT

Atlanta Drug Club Elections

A. S. MacConnell of Becton, Dickinson & Co. was elected president of the Atlanta Drug and Chemical Club at the annual election in March. Sam M. Edwards, Owens-Illinois Co., became vice-president; Charles J. Claxon, Becton, Dickson & Co., treasurer; and J. A. Raudonic, Eli Lilly & Co., secretary. The following men were elected to the board of directors: A. E. McCullough, Sterling Drug Co., chairman; C. H. Bishop, Hoffmann-LaRoche Inc.; George R. Fellows, Fritzsche Brothers, Inc.; R. V. Johnson, Johnson & Johnson; F. W. Nardin, Merck & Co.; and J. M. Still, Winthrop-Stearns Inc.

Customers like the clean-cut, quality look of Opticlear Vials.

Give your product the package it deserves —KIMBLE OPTICLEAR VIALS

THESE GLEAMING, lustrous glass containers reflect the superiority of your product.

When you pack in Kimble Opticlear Vials, you give your contents the sales advantage of sparkling eye appeal *plus* unique protection.

New special plastic stoppers provide a positive moisture-proof seal . . . keep contents free from moisture and dust. Even after they are removed and replaced repeatedly, these resilient stoppers reseal tightly.

Opticlear Vials improve the salability of every dry product we've tried in them. Find out how attractive *your* product can look in these outstanding vials.

* * *

Send us the sizes you use, and we'll ship free samples for your inspection.

KIMBLE GLASS TOLEDO 1, OHIO

Division of Owens-Illinois Glass Company

How many of these POTASSIUM THIOCYANATE features are important to you?

Check for Yourself

- It is an all-synthetic product.
- Crystals* are colorless, transparent, and odorless.
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- You have uniform quality and scheduled availability for Baker controls all raw materials.
- Precise process control insures high chemical purity.
- Containers are fiber, moisture-resistant drums polyethylene lined with friction cover tops to safeguard against atmospheric moisture.
- It is packaged in convenient 225, 100, 50 and 25 pound fiber drums.

*Picks up moisture. Should be kept in tightly closed containers.

You, too, will want to discover the superiority of Baker Potassium Thiocyanate in C.P. and N.F. Crystals.

Drug manufacturers, one after another, investigated its seven features—made comparative tests—and decided that this all-synthetic Potassium Thiocyanate had qualities that would, in turn, give their products superiority.

Users of Baker Potassium Thiocyanate, N.F. appreciate the assay of 99% plus and the unusually low indices of arsenic and heavy metals. Baker C.P. grade is chosen particularly for its low iron, chloride and sulfate content. When compounding medicinals related to arterial hypertension, these features of Baker Sodium and Potassium Thiocyanates are particularly important.

Check every one of the seven Baker features. Determine for yourself how many of these features are important to you. Then ask for samples and prices.

The comparative tests will be your best guide to value.

Address: J. T. Baker Chemical Co., *Executive Offices and Plant,* Phillipsburg, New Jersey

Baker CHEMICAL

Baker Chemicals

REAGENT • FINE • INDUSTRIAL

Named Govt. Service Mgr. by Ciba

Charles H. Whitbeck, professional service representative of Ciba Pharmaceutical Products, Inc. in Washington, D. C., has been appointed to the company's new post of Government Service Manager, according to Vincent A. Burgher, vice-president in charge of sales.

Pulva Sales Representatives

Pulva Corp. has appointed the following exclusive sales and service representatives: R. W. Fox for eastern Pennsylvania, southern New Jersey, Delaware, Maryland and Virginia; Harold L. Heakin Co., Inc., for northern California; and King-Gage Engineering Co., for the New England States. The Process Engineering & Equipment Corp. has been appointed for Missouri and southern Illinois.

Monsanto Vanillin from Lignin

Monsanto Chemical Co. has announced it will produce vanillin from lignin. New production units will be installed in St. Louis and Seattle to carry out the new process which will replace and augment the present capacity for producing vanillin from basic chemical materials. An entirely new manufacturing unit will be built by the company's Western division at Seattle to produce semi-refined vanillin, which in turn will be shipped to St. Louis to be refined to the U.S.P. product and will be sold by Monsanto's organic chemicals division.

Heyden Expands Technical Div.

Dr. Franklin T. Peters, manager, market development department, Heyden Chemical Co., has been assigned to Washington for two days out of each week to provide special service for defense agencies, in line with the company's expansion of its technical development division. Dr. A. L. Davis has been assigned to the market research section of the department, while Ely Balgley has become group leader in charge of the applications group of the department, and B. H. Silverman, formerly of the Mellon Institute, has joined the applications group as a chemist.

ARTHUR A. MULLIGAN

Mulligan With Felton

Arthur A. Mulligan has been added to the sales staff of the Felton Chemical Co., Inc., according to Frank Brumburgh, sales manager. He will be concerned with basic flavoring and perfumery materials and essential oils and aromatic chemicals.

DR. R. C. KLUSSENDORF

Klussendorf Appointed by CSC

Dr. Raymond C. Klussendorf, formerly editor-in-chief of the Journal of the American Veterinary Medical Association, has been appointed director of Veterinary Medical services of Commercial Solvents Corp., according to T. S. Carswell, vice-president in charge of research and development. His headquarters will be at the company's research center in Terre Haute, Ind.

Lazier Named to Pfizer Board

Wilbur A. Lazier, director of chemical research and development of Chas. Pfizer & Co., Inc., was elected to the board of directors at the annual stockholders meeting on April 2. The other 12 directors were reelected.

Doan Elected to Regents Post

Leland I. Doan, president of Dow Chemical Co. was elected to the board of regents for the University of Michigan last month in a state-wide election.

Members of Druggists Supply Corp. attending 11th annual dinner of Magnus, Mabee & Reynard, Inc. on March 3 at Statler Hotel in N. Y.

are you letting THIS SALES KILLER GET AWAY WITH IT ?

Sure you know an *unpleasant* taste or odor kills sales . . . but a merely *indifferent* taste or smell can be deadly too!

Don't be satisfied with anything less than a *sales-stimulating, MM&R-created* odor or flavor personality for your product . . . whether it be foot powder or face cream . . . tooth paste or hair tonic . . . pills or vitamin preparations.

The MM&R Technical Service Dept. will draw upon its extensive background of experience to develop something new . . . for *you!* Simply send a sample of your product and an indication of your perfuming or flavoring budget. After careful study and exhaustive tests, a *confidential* recommendation will be made.

There is no obligation! Call on MM&R now.

Builders of PRODUCT PREFERENCE through QUALITY ESSENTIAL OILS, PERFUMING MATERIALS and CONCENTRATED FLAVORS SINCE 1895

MAGNUS, MABEE & REYNARD, INC.

SINCE 1893 . . . ONE OF THE WORLD'S GREATEST SUPPLIERS OF ESSENTIAL OILS

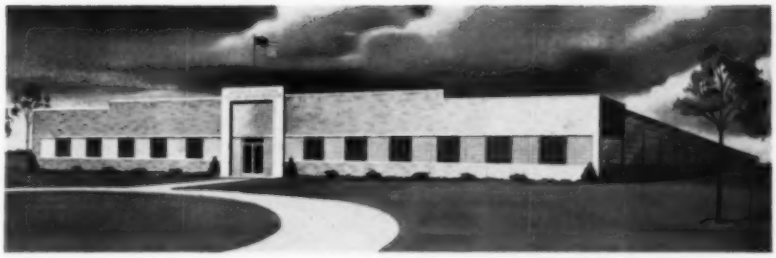
16 DESBROSSES STREET, NEW YORK 13, N. Y. • 221 NORTH LASALLE STREET, CHICAGO 1, ILL.

LOS ANGELES: BRAUN CORP. • SEATTLE, PORTLAND, SPOKANE: VAN WATERS & ROGERS, INC. • SAN FRANCISCO: BRAUN-KNECHT-HEIMANN CO.

Anchor Hocking Research Center

Anchor Hocking Glass Corp. has opened the first unit of a new engineering and research center at Lancaster, Ohio. This unit houses the package engineering and research division of Anchor Hocking and has all the scientific equipment required to render complete service to users of Anchorglass Containers and Anchor Caps.

The new building contains the following departments, all of which are at the service of customers and others interested in glass packaging: bacteriological laboratory, chemical laboratory, experimental packaging division, engineering department, assembly and service department, and the carton laboratory.



Artist's sketch of new Anchor Hocking Laboratory at Lancaster, Ohio, which contains Package Engineering and Research division. Building offers more than 46,000 square feet of floor space all on one floor. Ample room is provided for further expansion.

Named Smith-Dorsey Div. Mgr.

Tom E. Watson has been appointed division manager for the San Francisco division of the Smith-Dorsey Co.

AAAS Meeting Planned

The program of the Pharmacy Subsection of the Medical Sciences is now being made up for the next meeting (Philadelphia, December 26-31). Authors who wish to present papers before the Subsection are requested to send titles of their papers as soon as possible to Glenn L. Jenkins, chairman, Subsection Np, Purdue University, School of Pharmacy, Lafayette, Ind. Titles must be sent to Mr. Jenkins by September 15 in order to be included in the printed program.

Jewell Named Ayerst Med. Director

Dr. John B. Jewell has been appointed medical director of Ayerst, McKenna & Harrison Limited. He had formerly been medical director of the Canadian division of the firm and is now in charge of medical services for both the United States and Canada.

DR. JOHN B. JEWELL

Maltbie Sales Representatives

Maltbie Laboratories, Inc. recently appointed the following men as professional sales representatives: Robert L. Rex, Indiana; John R. Hamilton, Pennsylvania; Stanley W. Taylor, Richmond; George H. Travis, Michigan; Robert E. Schmid, New York; John R. Hornsby, Columbia, S.C.; John T. Harper, Atlanta; Robert M. Miller, Jr., Winston Salem, N.C.; and Anthony Van Zwaren, Baltimore.

Burgess Appointed by McKesson

Walter M. Burgess has been appointed manager of the New York chemical department of the chemical division of McKesson & Robbins, Inc., succeeding G. Webster Rice, who has resigned. He had formerly been assistant manager.

WALTER M. BURGESS

New Trade-Mark Edition Ready

The American Drug Manufacturers Association has announced the availability of the new edition of "Trade-Marks Registered with the A.D.M.A. & A.P.-M.A." which contains the trade-marks and generic names currently being used by member firms of both associations for their products up to March, 1951. The cost of the new edition will be $10.00 a copy when furnished in a spring binder. Those firms desiring to use their present binders may purchase the unbound book for $7.50 a copy.

Tintair Appointments

Harry B. Wasserman has been appointed New York division sales manager for Tintair, according to Phil Kalech, senior vice-president in charge of sales for Bymart, Inc. At the same time, Nathan H. Wichner was appointed district sales supervisor of the company

HARRY B. WASSERMAN

and will be in charge of all sales personnel and Tintair promotional activities in most of Pennsylvania and the western half of New York State.

The following twelve salesmen were added to district sales staffs: Frank E. Collopy, division sales manager in North Carolina, South Carolina, Georgia and Florida; Harry T. Manning and Edmund G. Lysaght in and around New York City; and Sidney Kasavana, and Edward F. Corbett for New England areas. Additional appointees were Charles Pemberton, Louis H. Zusser, J. Richard Wiley, Robert R. Warne, Jr., Larry Vernon, William H. Collins, and John H. Spear.

Emery Sales Representatives

J. A. Funk and William J. Siemens, Jr. have been assigned to sales territories by Emery Industries, Inc. and will work out of Cincinnati and Pittsburgh, respectively. These territories were vacated by E. G. Hibarger who is now district manager of the newly established Chicago office. D. R. Robertson and A. R. McDermott are working with Mr. Hibarger.

CHARLES L. BOWMAN

Retire from Innis, Speiden

C. C. Wickstead and T. G. Flavelle retired last month from Innis, Speiden & Co. and were presented gold watches by W. H. Sheffield, Jr., president. Mr. Wickstead started as an errand boy in 1895 for the chemical firm of A. Klipstein & Co., later becoming a salesman. He joined Innis, Speiden in 1906 as manager of the Aniline Color Department and was promoted gradually, to become vice-president in 1930 and treasurer in 1934. Mr. Flavelle, also a former A. Klipstein employee, became associated with Innis, Speiden in 1909 as assistant to Mr. Wickstead. From 1914 to 1917 he worked in the sales department, later becoming manager of the White Goods Department. He was appointed manager of the gum and wax division in 1927 and appointed a director of the company in 1934 and elected assistant secretary.

Both men will remain on the board of directors and act in an advisory capacity to the company, according to Mr. Sheffield.

Bowman Forms New Company

Charles L. Bowman has announced the formation of Bowman Feed Products, Inc., a new company which will manufacture nutritional specialties for sale to the feed trade. Mr. Bowman is president of the company; Willis A. Diekema, vice-president; Curtis R. Gray, secretary and treasurer; and Harley H. Hill, vice-president and general manager.

Machinery and equipment have already been installed in the new plant at 130 Central Ave., Holland, Mich., where the manufacturing, selling and purchasing operations will be conducted under the management of Mr. Hill.

HARLEY H. HILL

Thomas Promoted by CSC

E. Nelmes Thomas has been appointed assistant manager of the sales promotion division of Commercial Solvents Corp., according to H. J. Henry, vice-president in charge of sales. He has been associated with the company since 1946 when he served as technical writer.

Left to right, W. H. Sheffield, Jr., Innis, Speiden & Co. president, and G. S. Hamilton, vice-president, comptroller, and treasurer, presenting gold watches to C. C. Wickstead and T. G. Flavelle on occasion of their retirement from active service with company.

100 Years for Kohnstamm

H. Kohnstamm & Co., Inc. is this year celebrating its 100th anniversary, having been founded in 1851 by a young immigrant, Joseph Kohnstamm, who opened a small store, Kohnstamm & Co., at No. 3 Tryon Row, New York. Many generations of the European Kohnstamm family had been color chemists, a factor which helped Joseph decide to make use of his background of experience in the manufacture of fine colors when he established the business, specializing at first in the production of ultramarine blue. The quality of the blue was such that the color won first prize at the World's Fair in 1853 and provided added prestige for the Kohnstamm name.

Joseph Kohnstamm was later joined in the company by other members of the family and the firm name was changed to H. Kohnstamm & Co. More items were added to the company line as the business expanded. At first the operation was restricted to that of importing and selling but soon graduated to the actual manufacturing of the products, and their distribution. In this way, the firm reasoned, it could maintain a more rigid check on its manufacturing processes and a closer scrutiny on the quality of the products. Manufacturing operations soon entered the field of heavy chemicals for industrial use as well as colors for paints, printing inks and other technicals needs.

In 1884 the National Confectioners' Association held its first convention during which it accepted and endorsed the Kohnstamm certified colors as standards for the industry. Thereafter the firm manufactured colors to conform to the standards established at that time, a development which later led to the certification of colors by the Bureau of Chemistry, Department of Agriculture, in 1907.

H. Kohnstamm & Co. was incorporated in 1922, with the main office located at 83-93 Park Place, New York. A western division headquarters is now in Chicago, and branch offices are distributed in twenty-five cities throughout the country. Modern factories are owned and operated at Camden and Kearny, N. J., Brooklyn, and Clearing Ill. Officers of the company are Louis J. Woolf, president and treasurer; Hugo Pulver, Charles D. Allen and Richard S. Carmel, as vice-presidents; Robert A. Phair, secretary; Edwin W. Mayer and Joseph M. Castellano, assistant secretaries; and Walter J. Kohnstamm and Isidore Streisfeld, assistant treasurers.

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CERTIFIED COLORS
Standardization of strength, solubility and brilliance has made National D & C Colors the industry's standard of excellence year after year. Integrated production from basic raw materials makes National an ever-dependable source of supply.
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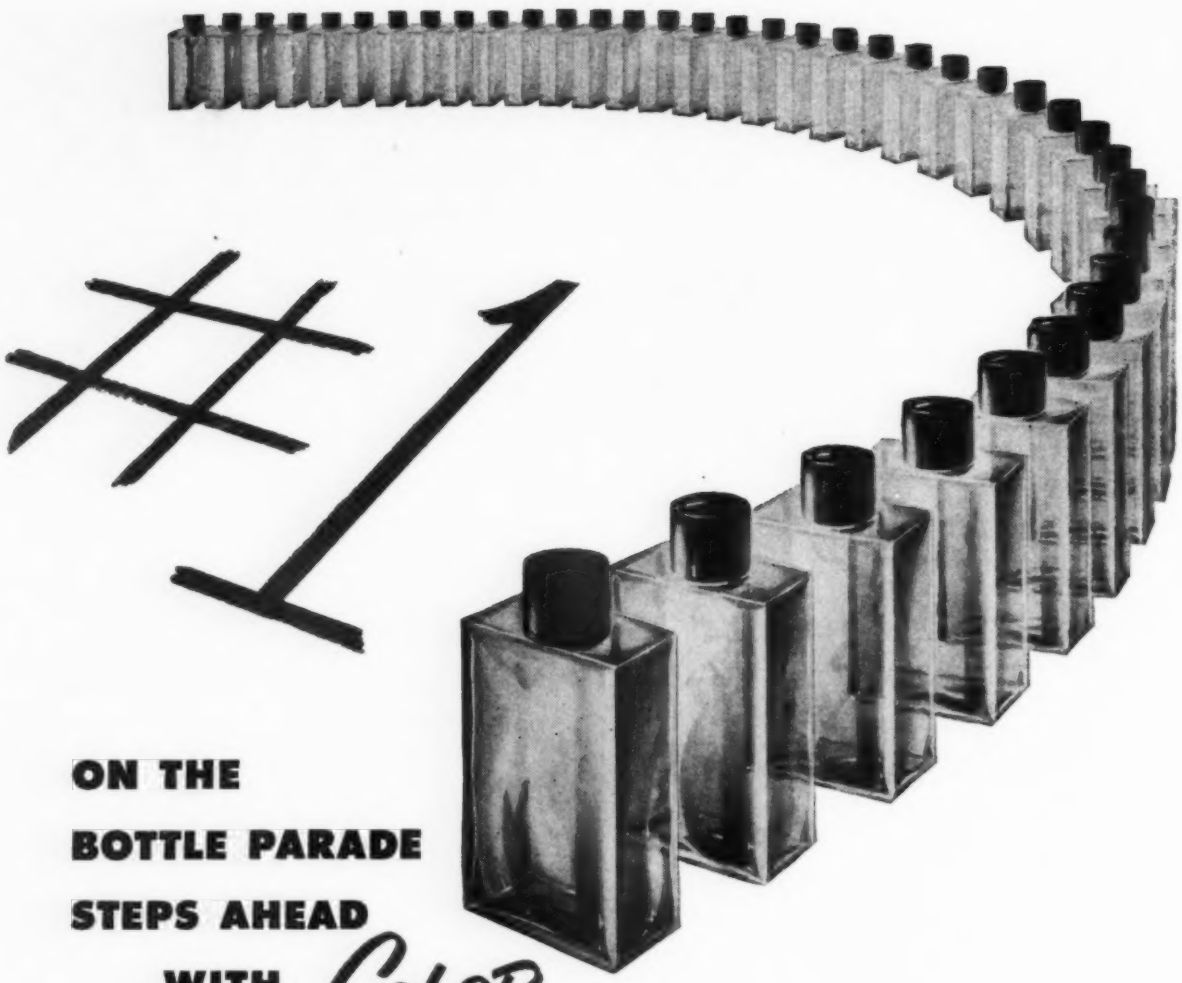

#1

ON THE BOTTLE PARADE STEPS AHEAD WITH *Color*

The bottled product that first attracts the customer's eye is generally the one he will buy. So why not give *your* bottles the added eye appeal of colorful plastic caps! They're available now—in Plaskon Molded Color—featuring a wide range of shades and a broad selection of styles. What's more, these molded color closures offer the advantages of *solid, permanent, non-chipping* color. They are resistant to solvents, greases, oils, dilute acids and alkalies. Their non-porous, smooth, satiny finish is warm and friendly to the touch. Manufacturer, wholesaler, retailer or pharmacist... you are bound to discover that Plaskon Molded Color makes an effective selling feature out of a bottle. Ask your supplier for more details!

Your package can help sell your product... cap it with

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Branch Offices: Boston, Chicago, New York, Los Angeles, Rochester
Manufacturers of Molding Compounds, Resin Glues, Coating Resins

PLASKON.
MOLDED COLOR

Cyanamid Consolidates Boston Units

American Cyanamid Co. has completed a contract with the Clements Realty Trust to lease a 60,000 square foot building to house its operations in Boston. The building, located at 1055 Commonwealth Ave., will replace four separate offices and warehouses, and will be leased to the company over a long period of time at a rental figure to exceed $1,000,000. Those units of the company using the new facilities will be Calco Chemical division's dyestuffs department and pigment department; industrial chemical division; coating resin department of the plastics and resins division; and Lederle Laboratories division's branch and Northeastern regional sales office.

Strong Cobb Promotes Executives

Michael A. Lauria has been elected vice-president and general superintendent of Strong Cobb & Co., Inc. and Ben T. Howiler, assistant vice-president in charge of sales, according to George Miller, president.

MICHAEL A. LAURIA

BEN T. HOWILER

Nevin Appointed by SKF Labs.

John K. Nevin, Jr. has been named purchasing agent of Smith, Kline & French Laboratories, according to R. W. Hompe, vice-president. He succeeds William A. Heymann, who has resigned to become a partner with his father in a family-owned business.

George W. von Hofe, left, president New Jersey Machine Corp., receiving certificate of Award in behalf of the ECA in recognition of his aid to European experts who have visited U. S. to study industrial production. Fred M. Desapio (right), Hoboken Mayor, represented William C. Foster, head of the Administration, during the presentation.

Chicago Soc. of Chemists Meets

The Chicago Society of Cosmetic Chemists set aside their April meeting as Ladies Night, during which Mrs. Sarah T. Lee, beauty editor of *Harper's Bazaar*, spoke on "The Romantic Survival in Beauty and Fashion."

Hensley Becomes Toni Sales Mgr.

Stuart K. Hensley, formerly assistant general sales manager, has been promoted to the post of general sales manager of the Toni Co., according to R. N. W. Harris, president. William F. Frost

STUART K. HENSLEY

has been appointed acting syndicate sales manager during the absence of Reg Knock who is on leave because of ill health.

Smolowes Visiting Europe

Philip Smolowe, vice-president of Jean Patou, Inc., and Mrs. Smolowe, sailed for Europe on the Liberte April 25 for a six-week tour of France and Italy. They will be the guests of Raymond Barbas, president of Jean Paton, Inc., and head of the French Couture, at his home in Biarritz.

Sun Tube Begins New Plant

Sun Tube Corp. recently broke ground for a new plant in Washington, N.J. which will supplement the main plant at Hillside. Scheduled to start production on Condenser cans and tubes early next year, the plant will initially employ about 300 people. J. D. Martin, vice-president of Sun Tube, will be in over-all charge, and Alexander Ballard will be resident manager.

The ground-breaking ceremonies took place on March 12 when officials of Sun Tube and Bristol-Myers, of which Sun is a wholly owned subsidiary, gathered with Mayor Fred L. Suttle, of Washington, and other local township officials. R. Smith Schenk, Sun president, tossed the first spadeful.

Fleuroma To Change Address

Fleuroma, Inc. will move to 40 West 21st St., New York, from their present location at 73 Sullivan St., in the near future. The 12-story manufacturing and office building at the new address has been purchased by the Friborg Corp., Fleuroma's wholly owned subsidiary.

Eaton Brochure Wins First Prize

A brochure on furacin vaginal suppositories, which was designed for Eaton Laboratories, Inc. by Ted Russell of Kiesewetter Associates, Inc., was awarded first prize in the Hamilton Printed Specimen Contest. The contest, conducted by W. C. Hamilton & Sons, Miquon, Pa., makers of Hamilton papers, reviewed a large number of printed pieces submitted from all over the country.

HEYDEN PENICILLIN and STREPTOMYCIN

LOOK BEHIND YOUR LABEL!

If you are a bulk purchaser of Penicillin and Streptomycin products—for packaging under your own name—it pays to look BEHIND your label for the service and assurance your customers desire.

Can you rely on these antibiotics for constant uniformity and purity? Can you depend on the producer for rigid control, plant facilities and constant source of supply? You can if the Heyden name and trademark are back of YOUR label. As one of the earliest producers of Penicillin on a large scale, Heyden combines manufacturing experience with the extensive research facilities essential to development of new and improved forms of antibiotics.

PENICILLIN PRODUCTS

VIALS: **Crystalline Penicillin G Potassium or Sodium; Crystalline Procaine Penicillin G in Sesame Oil with 2% Aluminum Monostearate w/v (cartridges, single- and multiple-dose vials) (also available in fortified form).**

Soluble Tablets, Troches and Buffered Tablets

• • •

STREPTOMYCIN PRODUCTS

VIALS: **Crystalline Dihydrostreptomycin Sulfate (1-gm. and 5-gm.).**
Dihydrostreptomycin Sulfate (1-gm. and 5-gm.).
Streptomycin Sulfate (1-gm. and 5-gm.).

MANUFACTURER-DISTRIBUTORS will be interested in Heyden's bulk and package service on penicillin and streptomycin. Write today for detailed particulars and your copy of the new brochure, "Heyden Antibiotics."

HEYDEN CHEMICAL CORPORATION

393 Seventh Avenue • New York 1, N.Y.

Abbott Promotions

Dr. Edward J. Matson has been promoted to assistant director of research, Abbott Laboratories, according to Dr. Robert D. Coghill, director of research. Additional promotions include those of Dr. Laurence W. Roth to assistant head of the pharmacological department and Robert Berg to assistant head of the microanalytical department.

Dr. Eads Named by Parke, Davis

Dr. F. E. Eads, assistant professor at Michigan State College, School of Veterinary Medicine, has been appointed by Parke, Davis & Co. as assistant to Dr. Hilton von Rosenberg, manager of the department of veterinary medicine.

Monsanto Appointments

J. Kenneth Craver has been appointed manager of the resin materials and functional fluids section of Monsanto Chemical Company's organic chemicals division, and Roland S. Shumard has been named manager of the fine chemicals section. Mr. Shumard's section will be responsible for the development of pharmaceuticals, flavors, disinfectants and industrial preservatives.

John Wyeth Plans Expansion

John Wyeth Laboratories S. A., along with an affiliate, Kolynos S. A., in Argentina, has bought 650,000 square feet of land in Quilmes, a Buenos Aires suburb. The transaction included two manufacturing buildings and a large power plant which are now being renovated. Facilities will be ready for use, according to Robert C. Hodgman, president of Wyeth International, by late fall. John Wyeth Laboratories, an affiliate of Wyeth, Inc., subsidiary of American Home Products Corp., has introduced many new products in the Argentine market which are almost entirely manufactured from local raw materials. The present expansion plans were developed in order to enlarge on this manufacturing activity.

Stokes Creates Expediting Staff

F. J. Stokes Machine Co. has increased its regular staff of six expediters with six additional full-time men in order to meet the increased demand created by the defense program. The new men have been drawn from the sales staff and are completely familiar with internal procedures and have intimate knowledge of the equipment and personnel.

Robert Berg, assistant head, microanalytical department; Dr. E. J. Matson, assistant director of research; and Dr. L. W. Roth, assistant head, pharmacological department, (left to right) Abbott Labs., are congratulated by President Volwiler on recent promotions.

Hirsch Appointed by Schieffelin

Benjamin Hirsch has been appointed merchandising co-ordinator of Pears Soap sales in the United States by Schieffelin & Co.

Promoted by Wm. S. Merrell

Frank T. Jacobs has been promoted to the newly formed position of director of marketing by the Wm. S. Merrell Co.,

DAN P. PAYNE

while Dan P. Payne, present sales manager of the southwestern division, has been advanced to general sales manager.

New Sharp & Dohme Warehouse

Sharp & Dohme, Inc. is constructing a new branch warehouse at the corner of Sunshine and Chrysler Roads in Kansas City, Kansas, according to Elmer W. Metzger, director of branch operations. The new building is expected to be completed in October and will provide almost twice the floor space now available at the company's quarters in Kansas City, Mo. It will contain about 25,000 square feet of floor space.

Continental Can Moves L.A. Office

Continental Can Company's Los Angeles sales offices have moved into a new office building at 1120 Wilshire Boulevard. This new building houses sales offices for the company's metal can, fibre drum, paper container, and Bond Crown and Cork divisions as well as accounting and credit offices for the Los Angeles district.

FRANK T. JACOBS

Allaire, Woodward Moves to Wash.

Allaire, Woodward Co. in Peoria, Ill. will be transferred to the I. P. Callison & Sons plant in Chehalis, Wash., a move that was decided upon after Callison purchased the former last year. At the same time, joint offices for both companies will be established at 1412 Chanin Building in New York, and warehouse space has been procured in New Jersey. Complete stores of all materials are being maintained in the warehouse for prompt shipment.

Henry Callison will be in charge of all eastern activities of both Callison & Sons and Allaire, Woodward Co.

Ungerer Moves Chicago Office

The Chicago office of Ungerer & Co., formerly located at 325 West Huron St., moved on April 5 to 1607 West Howard St., Chicago 26. The telephone number is AMbassador 2-0517.

Represents Emulsol Corp.

The Hukill Chemical Corp., 2533 Broadway Ave., Cleveland, is now representing the Emulsol Corp. in central and southern Michigan areas and in Ohio on the technical service and sales of surface active specialties to the food, pharmaceutical, industrial, and agricultural industries.

Addresses Missouri Drug & Chem.

Charlton MacVeagh, vice-chairman of the board and treasurer of Mallinckrodt Chemical Works, spoke before the Associated Drug and Chemical Industries of Missouri on April 11. His subject was "American Foreign Policy and the Home Front."

Bensler Appointed by Lever

E. Joseph Bensler, formerly sales administration manager, has been appointed marketing service manager of the Pepsodent division of Lever Brothers Co., according to Charles T. Lipscomb, Jr., president. He will be responsible for coordinating sales records, forecasts, budgets, actual expenditures and production schedules.

New Amer. Cyan. Building in L. A.

American Cyanamid Co. has announced that construction has started on a 64,000 square foot building in Los Angeles, scheduled to be completed by September 1. It is being built under contract with John M. Stahl and Buttress and McClelland, Inc. and will be leased to the company.

P. J. Ronan, resident manager of Cyanamid's West Coast operations; Edward L. Larson, regional manager, Lederle Laboratories division; H. L. Oak, Calco Chemical division; and S. T. Dahl, West Coast sales manager for Cyanamid, all participated in groundbreaking ceremonies last month. Among the units of the company which will use the new facilities are Calco Chemical division's pigment department and bulk pharmaceutical department; the industrial chemicals division, the plastics and resins division, and Lederle Laboratories division's branch office and regional sales office. Cyanamid's West Coast executive offices, now located at Azusa, will also be in the new building.

McQueen Leaves Pepsodent

Harry D. McQueen, National Wholesale manager for the Pepsodent division of Lever Bros., has announced his severance from that company. He has not stated his future plans. He had formerly been Pepsodent's central divisional sales manager with headquarters in Chicago.

Van Horn Promoted by Dow

John C. Van Horn has been appointed assistant manager of the technical service and development division of the Dow Chemical Co., according to C. B. Branch, division manager.

New Service for Feed Industry

Sterwin Chemicals Inc., subsidiary of Sterling Drug Inc., has developed a new service for the nation's feed industry, according to P. Val Kolb, president. The company is now prepared to distribute feed concentrate mixtures to individual feed manufacturers whose needs vary with climatic, mineral and geographic conditions. This amounts to the supplying of special "custom-blended" feed concentrates of vitamins and antibiotics to meet the particular poultry and livestock requirements.

Named Sharp & Dohme Prod. Mgr.

Alfredo S. Onrubia has been appointed production manager of the new Sharp & Dohme (Philippines), Inc. plant now under construction at Manila, according to W. B. Wimpenney, director of Sharp & Dohme export operations.

Vandever Appointed by Mennen

Thomas G. Vandever, field sales manager of the Mennen Co. has been appointed sales manager. He had formerly been manager of salesmen for Johnson & Johnson.

Tussy Beauty Counsellor Changes

Penelope Cavanaugh, Tussy rotator for Whelan Drug Co. in Los Angeles, has been appointed Junior sales representative and will assist William Turnage in the southwest. Loretta Marshall succeeds Dorothy Stokesberry as beauty counsellor, assisting C. V. Graham, in Oklahoma, Colorado, Nebraska, Kansas and Wyoming. Arnette O'Brien has joined Tussy as beauty counsellor in the territory of Jim Vanlandingham (Idaho, Washington, Oregon and Montana), and Lorraine Robin has been added to the staff of H. P. Morris as beauty counsellor in North Carolina, South Carolina, Tennessee and Virginia.

Huisking Moves to Brooklyn

Chas. L. Huisking & Co., Inc. moved to larger quarters at 45 Clinton Ave., Brooklyn 5, on April 20. The new telephone number is ULster 8-5800.

Cincinnati Drug Ass'n Meeting

Philip R. Adams, director of the Cincinnati Art Museum, the Art Academy of Cincinnati, and the Taft Museum, addressed the Cincinnati Drug and Chemical Association, Inc. at the dinner meeting on May 11 at the University Club.

Vernon W. Franzen

Vernon W. Franzen, 40, salesman associated with the Chicago office of Givaudan-Delawanna, Inc., died March 23 at Bensonville, Ill. He had had a serious ailment and had undergone surgery last fall, making only a partial recovery during the winter.

Mr. Franzen died a few days before his twentieth anniversary with the company; he is survived by his wife, two children, his parents, and a sister.

Samuel P. Gibson

Samuel P. Gibson, manager of the market research division of Commercial Solvents Corp., died April 23 after a brief illness in the Madison Ave. Hospital in New York. He was 52 years old. He joined Arthur D. Lillie, Inc. after the first world war, later becoming associated with Empire Distilling Co., until 1938 when he began working for Commercial Solvents.

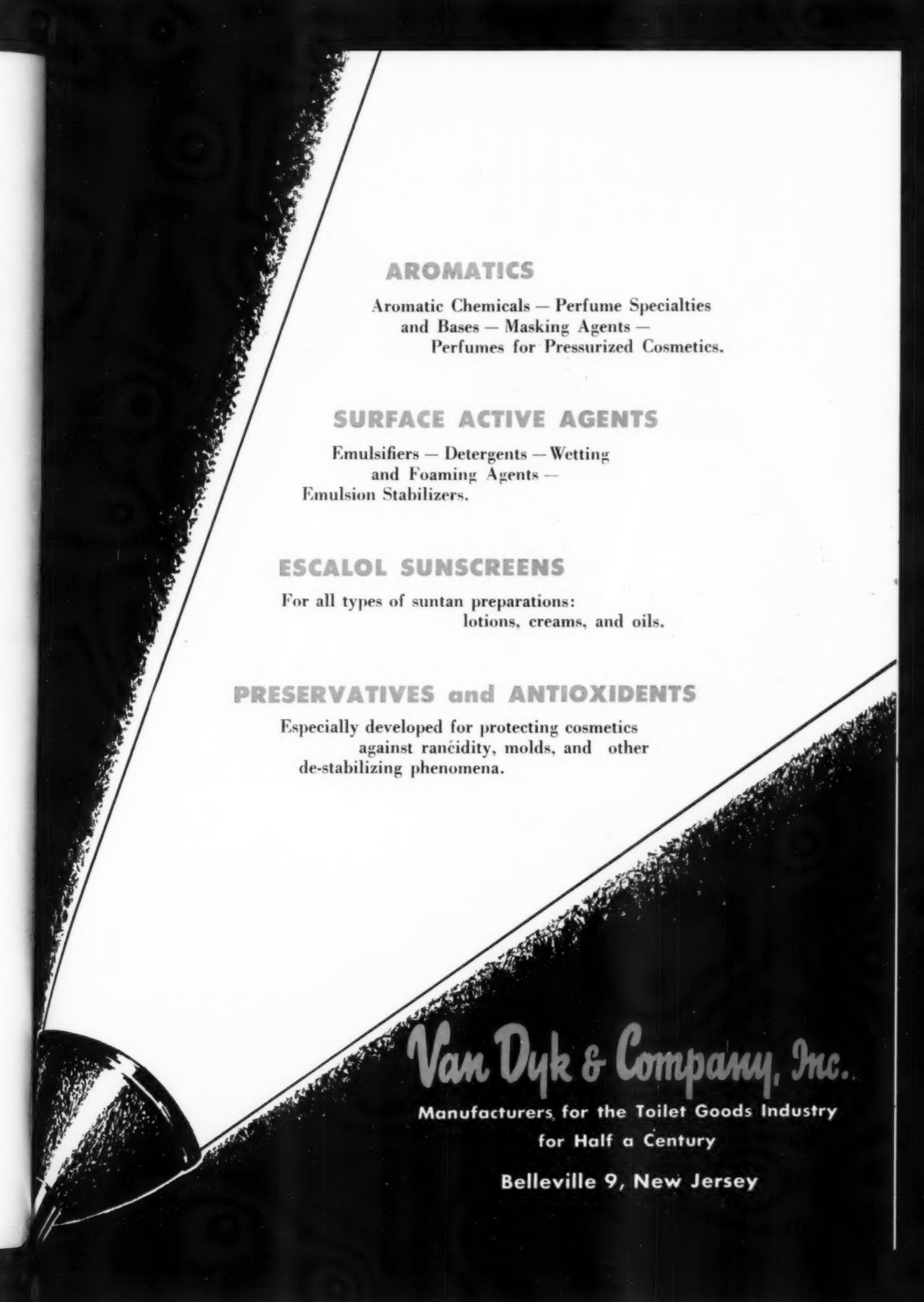
He was a former president of the Chemical Market Research Association and a member of the Society of Chemical Industry. Mr. Gibson is survived by his widow, Anne E. Gibson; a daughter, Mrs. Thomas S. Colahan; and two sons, Robert S. and James D. Gibson.

John W. James

John W. James, president of Towns & James, Inc., died April 8 while vacationing in Magagnosc, France. He was 77 years old.

Charles E. Whitten

Charles E. Whitten, president of Gair Co. Canada Limited, Toronto, died suddenly on April 18 at the age of 62. He became president and general manager of the company last June and was subsequently also elected a director of Robert Gair Co., Inc. He is survived by his wife, Mrs. Nan Whitten, and two sons, Charles, Jr., and John.



AROMATICS

Aromatic Chemicals — Perfume Specialties
and Bases — Masking Agents —
Perfumes for Pressurized Cosmetics.

SURFACE ACTIVE AGENTS

Emulsifiers — Detergents — Wetting
and Foaming Agents —
Emulsion Stabilizers.

ESCALOL SUNSCREENS

For all types of suntan preparations:
lotions, creams, and oils.

PRESERVATIVES and ANTIOXIDENTS

Especially developed for protecting cosmetics
against rancidity, molds, and other
de-stabilizing phenomena.

Van Dyk & Company, Inc.

Manufacturers for the Toilet Goods Industry
for Half a Century

Belleville 9, New Jersey

handsome from every angle . . .

. . . True of real beauty and true of beauty's most popular containers — H-A Cosmeticware.

Seen on dealers' shelves, home dressing tables, or in the hand of the user, they suggest the quality of the products they contain. For efficient packing, efficient selling, use H-A Opal Jars and Cosmetic Bottles.

HAZEL-ATLAS GLASS COMPANY
WHEELING, W. VA.

READERS' QUESTIONS

WRINKLE REMOVING: We would be grateful for any information you can give us with regard to the principles involved in temporary wrinkle remover creams and liquids. Any information you can supply us with which we can make use of for further study will be greatly appreciated. New York City.

Since I do not know the type of preparation you have in mind, I am afraid I cannot be very specific. To my way of thinking, several mechanisms enter the picture. First, is the use of an astringent like a tannate or one of the aluminum compounds. It may also be due to the action of certain compounds which contract on drying thereby pulling the skin smooth. Such compounds, as far as I know, are not extensively used since they would no doubt cake and harden on the face. However, if I remember correctly, certain facial masks are said to provide such an effect but this in turn may be due to the presence of an astringent or to a cleansing action.

Emollient creams or lotions may aid in smoothing out facial lines caused solely by skin dryness. The newest approach to the elimination of wrinkles, and the one which you may have in mind, is through the use of female sex hormones. These cause turgor fullness of the dermal tissues and thus produce the smooth, youthful effect.

DOG REPELLENT: I am interested in marketing an item for keeping dogs away from shrubbery around the house. If possible, I would like to have a formula for a liquid preparation. Kansas City.

The formulation of dog repellents is somewhat out of our line. However, a modern liquid product for use around shrubbery and buildings, can be made from:

Isopropyl alcohol	**89 parts**
Anhydrous lanolin	**5 " **
Amyl mercaptan	**10 " **
Creosote	**2 " **

WHITE HAIR TREATMENTS: We have received an inquiry in which we have been requested to supply a shampoo or product suitable for white hair to assist in preventing a yellowing appearance after washing. It would be greatly appreciated if you could supply us with the above information. Ottawa.

The simplest shampoo for white hair that I know, as given by Thomssen, is as follows:

Toilet soap powder	**28 lbs.**
Borax	**22 lbs.**
Aubepine powder	**1 oz.**

A procedure for imparting a bluish or "whitening" effect to the hair can be achieved through the use of a dilute solution of a dye of the aniline violet type, this being used as a rinse after the shampoo. Such hair tints or color rinses are made by mixing a certified (FDA) dye such as D & C violet #1 with citric or tartaric acid, the latter being preferred since citric acid is said to be drying to the hair of some users. Only a small quantity of dye is required in admixture with the acid. They are generally sold in dry form in envelopes containing about 30 grains of the compound; this being dissolved in a quart of water prior to use.

WAVESET POWDER: We are receiving many inquiries from our customers for a finger setting lotion in a crystalline concentrated form. We would be very much obliged if you would be kind enough to please give us a formula for same. It is necessary that we should be able to make it up in concentrated form, a dry powder, perfumed and antiseptic, to make up to two to three gallons when diluted with cold water. Dublin.

I think you will find that the following formula for a waveset powder, taken from Thomssen's book, "Modern Cosmetics," will meet your needs:

Powdered gum karaya	**93.00 per cent**
Methyl parahydroxybenzoate	**6.00 " **
Color, water-soluble	**0.02 " **
Alcohol	**0.73 " **
Perfume	**0.25 " **

Mix the preservative and the gum. Mix the color and the perfume with the alcohol and spray over the gum mixture while it is being mixed. When uniform color distribution has been effected, spread the gum out and allow the alcohol to evaporate.

COAL TAR SOLUTION: I need to make a 20 per cent solution of coal tar for external medical use. Will you please tell me how I can do it in the most economical way, so as to make large quantities for use in a hospital? Guatemala City.

Herman Goodman, the well-known dermatologist, suggests the following procedure for making a tar solution in the strength you desire:

Coal tar	**20 per cent**
Quillaja	**10 " **
Alcohol, to make	**100 " **

Another variation, which you may adapt to your needs, is given as follows:

Tar	**10 per cent**
Sodium carbonate	**10 " **
Water, to make	**100 " **

Dissolve the sodium carbonate in the water heated to about 50°C. To this solution add the tar and shake vigorously until the mixture is homogeneous. After maceration the liquid should be filtered, if necessary.

COSTS
ON YOUR MIND?

THIS MAY HELP

Cost-minded and Sales-minded executives are checking up on their packaging methods more closely than ever . . . They have found that modernization in this department pays off quickly—in lower costs and increased sales.

Modern "PACKAGE" machines operate faster—lower labor costs . . . Require less supervision and maintenance . . . Save packaging material . . . It is not uncommon to find a machine paying for itself in a few months' time!

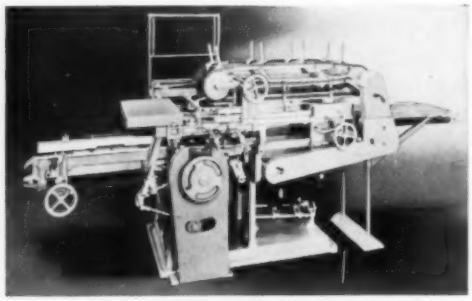
These cost-cutting machines can be adapted to produce the latest and most sales-appealing types of packages with practically any kind of material. You can, therefore, design a package exactly suited to your product and your sales promotion methods . . . A package that packs a real sales punch!

Here at "PACKAGE" you'll find 38 years of unexcelled experience gained in serving package goods manufacturers in every field. Why not take advantage of it?

Write for our leaflet "Packages that Sell"

We have machines for wrapping a wide variety of products and machines that make cartons from low-cost die-cut blanks.

Machines that bundle cartons in dozen and half-dozen lots.



Most widely used of all wrapping machines—Model FA. One of over 80 models in our line.

PACKAGE MACHINERY COMPANY
SPRINGFIELD, MASSACHUSETTS

NEW YORK CHICAGO BOSTON CLEVELAND ATLANTA DALLAS DENVER LOS ANGELES SAN FRANCISCO SEATTLE TORONTO MEXICO, D.F.

MANAGEMENT FORUM

By Francis Chilson
INDUSTRIAL CONSULTANT

Cosmetic Therapy

It has seemed to me always that the medical profession and the cosmetic industry alike have ignored an important therapeutic factor in the cosmetic treatment of disease. The first step in the treatment of disease should be to remove or conceal its outward effects. When people look ill they feel ill. When a patient dies the undertakers do a pretty good job of making the cadaver look "natural." But while still alive nothing is done to stimulate the patient psychologically by making him look less ill than he really is.

I know what I am talking about from personal experience. When I entered a sanitarium for advanced tubercular patients at the age of 27 and saw all about me so many people who looked like living corpses, I became extremely depressed. I was sure my last chips were in. Then one day I noticed that my ears and hands still had the color of good rich blood left in them. Hope flooded back arousing the desire to get up fighting once again, and, in spite of bad x-rays and other tests, I felt I could lick all the damn TB bugs in the world.

In his book, The Care of The Patient, Dr. Francis W. Peabody said, "Sickness produces an abnormally sensitive emotional state in almost everyone, and in many cases the emotional state repercusses, as it were, on the organic disease."

Again he said, "The practice of medicine . . . is an art, based to an increasing extent on the medical sciences, but comprising much that still remains outside the realm of any science."

Since Doctors have known for years the importance of making a patient think he is better than he actually is and very often will tell the patient he looks "fine," in spite of obvious contrary evidence, I wonder why physicians, as a first step in treatment, haven't utilized existing cosmetic techniques, which in a few minutes actually would make the patient look better than he feels. I don't mean that doctors should become cosmeticians, or nurses either—there aren't enough of them— but it seems to me every hospital should have a staff of at least one good cosmetician skilled in the art of make up.

Nursing training should include courses in make up. Good private nurses do try to bolster their patient's morale through the application of cosmetic techniques. But their skill is limited and hence inadequate.

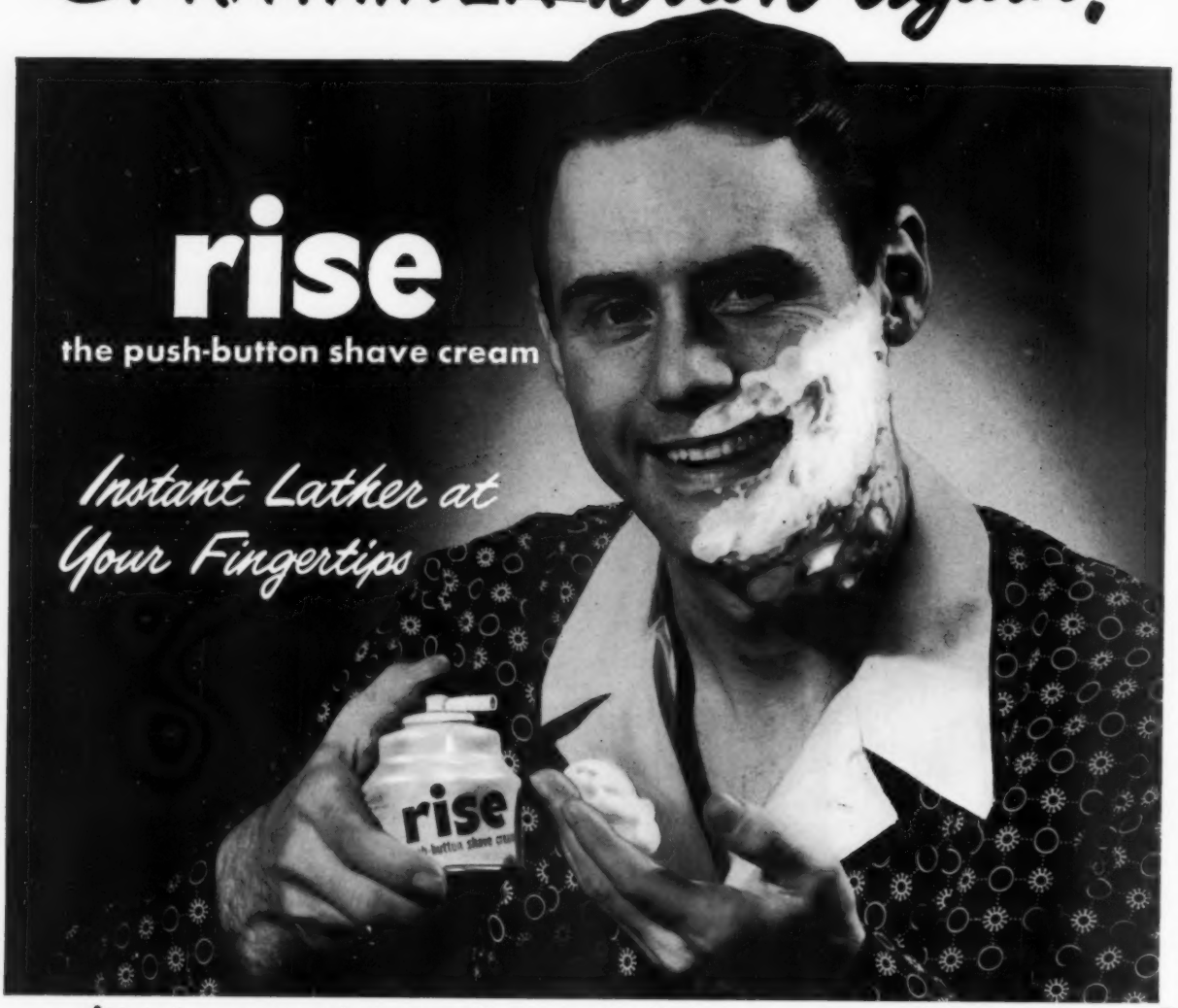
Management Goes Back to School

It is an interesting sign of the increasing complexity of business operations that major universities are providing courses in advanced management techniques. These courses are limited to upper case executives and are given by the Harvard School of Business, the Wharton School of Finance, the University of Pittsburgh, and, I believe, several other major universities as well. Academic training is not regarded as prerequisite for these courses but a major executive responsibility is. Hence the courses are made up of company presidents, vice-presidents, salesmanagers, plant managers and men of similar responsibilities. The longest course, that at Harvard, embraces twelve weeks and in practically every instance the tuition comes high. The time will surely come when business management will be regarded as a profession. It is incongruous that business management which utilizes the services of professionals —lawyers, engineers, scientists—is not itself a profession.

The Packaging Show

For the first time the Packaging Show at Atlantic City exhibited a rational balance between equipment and packaging materials. There was this year a greater variety and quantity of equipment at the show than ever before. There were a few too many labeling machines. Actually there were four entirely new automatic labeling machines in the exhibit. There was

SPRA-TAINER Does It Again!



rise is the greatest contribution to *quick, easy, comfortable* shaving in modern times! Unlike ordinary, conventional brushless shave preparations, RISE is beard-softening, skin-soothing *brushless lather* which is pressure dispensed — ready to use — right from its Crown SPRA-TAINER.

Speed:

Touch the button and out sprays a constant stream of rich lather.

Ease:

No brush needed! Simply smooth the fluffy lather over your beard.

Comfort:

Whisk off whiskers for a clean, close shave with no pull or pain.

rise, created by Carter Products, Inc., is pressure packaged in Crown SPRA-TAINER — the original and leading lightweight, low-cost propulsion can. SPRA-TAINER is first in Sales because of its modern design . . . first with Manufacturers because of exclusive "No Side Seam — No Top Seam" construction for utmost strength and dependability.

Perhaps you, too, have a product which will spray. Investigate Crown SPRA-TAINER!

☐ Please send literature re Crown SPRA-TAINER.
☐ Please have a Crown Sales Representative call.

Name.....
Firm.....
Address.....

Crown Can Co., Erie Ave. at H St., Phila. 34, Pa.

CROWN CAN

Division of

CROWN CORK & SEAL COMPANY

One of America's Largest Can Manufacturers • Plants at Philadelphia, Chicago, Orlando • Branch Offices: New York, Baltimore, Pittsburgh, St. Louis

a great variety of equipment for packaging ampuls and more container and case marking machines than I had ever seen in one place before.

Ampul Inspection

I ran into one of the boys at the Packaging Show who told me I'd have to eat crow on the RCA Ampule inspection machine because the machine was demonstrated recently at Camden and it worked to the complete satisfaction of a number of plant people from the trade. Well, I've had to eat crow before, feathers and all—so often in fact that I'm beginning to like the taste of it. As I understand it the machine will work on clear solutions in clear ampuls only. In its present stage of development the machine cannot inspect any faster than a good inspector, hence, it would not be economical in the smaller plants. Its economic utility consists in the fact that one operator can feed three or four machines. The cost of the machine considering its limitations as to speed and application is high.

The Ivano Plan

You will be interested to know that the Ivano Plan described last month was put to a severe test after the plan was put into effect several months ago. First the company was forced to suspend the second shift because of governmental restrictions on its primary raw material. A worse blow fell a few weeks later when the government commandeered all its basic raw material. This forced a complete shut down as soon as supplies on hand were consumed. Some weeks later sufficient supplies were obtained abroad to permit resumption of operations on a single shift basis. When the workers were called back all but four returned. At this point the reasons for the failure of the four to return have not been investigated. When the shutdown wages were paid some of the girls received almost $200. They were delighted and threatened to kiss the ears off the plant manager, George Schilling. The fathead was too shy to take them up on it. If it had been me I'd have been covered with lipstick from ear to ear.

Thus the wisdom of the plan has been demonstrated. If the company had had to start up again with an entirely green crew, training costs would have far exceeded the shut down wages that were paid. As a matter of fact since Benton Harbor, where the plant is located, is a highly industrialized town and labor of any kind is exceedingly hard to get, there is every reason to believe that the company could not have recruited a sufficient force to operate at a normal level for weeks or even months.

This point is emphasized for the reason that working conditions in the plant, because of the nature of the structures and the character of the product, are not by any means as attractive as they are in other plants. Someday of course when material supplies are assured the company plans to build a new plant which will leave nothing to be desired as to working conditions.

Production for Protection

D. M. D. Charlie Wilson has issued a statement as this column is being written confirming what so often has been said here: We can have guns and butter too. Wilson says that we can double the output of the 1942-46 period if we do not get fouled up by inflation and the actual storm of war. Wilson believes once we get rolling, that our productive capacity will assure peace in the world. Schlichter said it before and I did many times. It is nice to have a man of Wilson's experience and stature express the same opinion. It is nice to feel that we production men aren't as dumb as we sometimes look or half as dumb as the sales department sometimes thinks we are.

Production Weakness

The productive power of this country is based alike for its maintenance and its future growth upon management, men, materials, machinery and *sustained inventiveness*. Other nations are as rich as we in natural resources or even richer, but because they lack the ingenuity to convert these resources into usable products, they lag far behind us in industrial progress.

We have hitherto taken inventiveness for granted as a national trait which needs no nurturing. This is our Achilles heel. Inventiveness depends upon keen interest in particular fields of endeavor, which in our country are principally mechanical. If the focus of national interest should shift, let us say to religion or art, the whole mighty industrial apparatus would lose momentum and eventually stop. Lest you think this thought far-fetched remember that it was the lack of interest in material things and an overwhelming concentration on the hereafter that brought on the dark ages, during which mechanical invention and economic progress halted. Later came the Renaissance with its focus of interest on art, and the application of art forms especially in architecture, revived invention and interest in mechanics.

Since continued industrial and scientific progress depends so much upon invention it is remarkable that our universities do not consciously endeavor to develop inventive talent instead of taking for granted that it is an inevitable concomitant of scientific training in every field whatsoever.

We depend too much upon inventive geniuses. We are inclined to think that inventive genius is a God-given trait possessed by only a few. It is my belief that inventiveness can be developed just like any other skill. It requires intense interest, intense concentration, persistence and work. Even the great Edison's inventions did not come full fledged out of the blue but were the result, as he himself said, of "trying one thing after the other." No idea is ever wholly new regardless of who conceives it. An "original" idea or invention is the crystallization in a single mind and in a singular form of the experience of the race and of the individual, suffused with percipient observation. Men, for example, continually invent new machines. Yet every machine and every mechanical apparatus ever

—catch Pneumatic in the act...

...doing a

"LOWER COST PER CONTAINER" job

for famed

COLGATE

products

To production engineers, plant superintendents and top management alike, Pneumatic equipment in action is a pleasureable, profit making picture to behold.

That's the picture at Colgate-Palmolive-Peet Company where the latest high speed Pneumatic bottling lines clean, fill, cap and label the containers for Halo and Palmolive Shampoos, and Cashmere Bouquet Hand Lotion, too! That's the picture in so many of America's leading plants that it is obvious Pneumatic has "got something" no other equipment can match.

That "something" can be summarized simply as (1) Sounder basic engineering (2) Highly practical, yet imaginative and modern design (3) Precision construction. Result — smoother performance, longer wear — "lower cost per container" operation.

PNEUMATIC SCALE CORP., LTD., 70 Newport Avenue, Quincy 71, Massachusetts. Branch Offices in New York, New York; Chicago, Illinois; San Francisco and Los Angeles, California; Seattle, Washington.

At right: Conveyor synchronized bottling line at Colgate's Jersey City plant. Similar Pneumatic equipment is operating at Jeffersonville, Indiana and Berkeley, California.

PNEUMATIC
LOWEST COST PACKAGE EQUIPMENT

PACKAGING AND BOTTLING MACHINERY

conceived represents only a particular combination of a few simple mechanical elements such as wheels, levers, cams etc.

Progress is not made only through the titanic conceptions of the few great geniuses; it is made by the millions of small inventions of small inventors. Training in invention could be given by the universities just as it is given by some of the great industrial companies. General Electric among many others has a department where engineers and scientists are trained to invent. The department may be called the "development" or the "mechanical research" department but it is nevertheless, a school where interested minds, working together upon common problems react upon each other as flint upon steel to produce those sparks we call "inventions."

Inventiveness is the life blood of progress. But it is stifled by the befouling clutter of red tape and organization procedures that waste so much of the time of creative men.

Plant Management

Not long ago I saw a couple of men loading pallets with heavy cases of finished stock. In my life I never saw men work harder. The plant manager told me with great self satisfaction that the men were doing the work formerly done by four men and were each making almost $20 a day since they had been put on incentive rates. The plant manager was very proud of himself and was offended when I told him he should be fired for allowing men to work that hard. The men were young and stalwart but notwithstanding, such a pace will burn them up in a few years.

It is all very well to reduce labor costs per unit and to increase the productive potential of working people, but it is not good industrial engineering to push people to the limit of physical or mental endurance. The fundamental aim of industrial engineering is to make work easier and more interesting whenever possible. And when it is not possible to make a repetitive operation more interesting, the environment in which the work is done can be made more interesting. If this cannot be done perhaps extraneous social activities can be improved to make association with the company more inviting.

There is absolutely no connection between the output of a worker and the amount of physical and mental energy he puts into it. I have witnessed many instances where the output of workers was multipled many times and yet the workers were using less physical and mental energy than they had used fomerly. This is good industrial engineering especially when the worker also participates financially in some way by the increased output. I do not mean by incentive rates necessarily. There are other forms of financial compensation such as profit sharing and insurance plans, increased vacation time, shorter hours etc.

It cannot be denied that increased output in the majority of cases is achieved by mechanization, by better material handling, by better layout, by better management, and in such instances, the worker makes no individual contribution at all. Nevertheless it must be admitted that the worker becomes more important as his output increases regardless of how the increased output was achieved. If by mechanization you can simplify the work of five people so that one can do it, that one person becomes far more important than any one of the five. Indeed, he becomes as important as all five put together, and maybe even more so, since he may have in his care a machine representing a substantial investment of company funds.

Good industrial engineering does not consist in trying to squeeze the last drop out of the lemon for with that last drop comes bitterness and bitterness begets hate.

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Refrigerating Unit

The Niagara Blower Company has introduced new, improved "No Frost" equipment for refrigerating cold test rooms, cold processing, such as the quick freezing of foods, and for food products chilling and cold storage.

The equipment consists of the Niagara Spray Cooler which provides a controlled cold air stream at sub-zero temperatures by means of passing air over refrigerated coils that are prevented from accumulating ice or frost by a constant spray of Niagara "No Frost" Liquid, a non-freezing compound. In order to keep this process automatic and continuous, the non-freezing liquid is maintained in a concentrated condition by constantly removing the moisture that is condensed out of the atmosphere by contact with the refrigerated spray. This is done in the Niagara "No Frost" Concentrator, now improved by the adoption of a completely new method with newly designed apparatus. A portion of the No Frost solution, as it is continuously being diluted by the condensation of water vapor in the Spray Cooler is pumped to the concentrator. Here the water is removed by evaporation. The diluted solution is sprayed in a chamber through which air is drawn by fans. A heating element raises the temperature of the air, promoting the evaporation of the water, which evaporates at a much higher rate than the No Frost liquid by reason of vapor pressure differences. In a second stage of re-concentration, located above the spray nozzles, the air stream, which now contains the evaporated water vapor and some No Frost liquid vapor, is cooled by a reflux coil. This, in increasing the relative humidity of the air stream, forces the condensation of the No Frost Liquid Vapor. The re-concentrated No Frost solution is returned to the Spray Cooler.

The new concentrator replaces older types in which the water was removed by heating above the boiling point. It has the advantages of operating at lower temperature, increased capacity in smaller space with more

Are there costly "leaks" in your Weighing Operations?

The fact that your present scales are simply accurate is not enough today. Ask yourself these questions: (1) do they fit your operation, (2) are they geared to other production line equipment as to speed and adaptability, (3) do they require more man-hours to use than they should, (4) do you have weighing duplication. Searching appraisal of these questions can stop costly "leaks" for you . . . especially in such tasks as uniform ingredient compounding and volume packaging of consumer drug and cosmetic packages. EXACT WEIGHT scales, strictly for industrial use, stop these costly leaks because they are designed and built for your particular industry. Further still they are fitted to individual operations of your industry. Illustrated is Selectrol automatically checkweighing packages from filling machine in high speed production. Here is equipment geared to speed of operation, production line layout and capacity to save time, money, product and manpower for you. Write for full details to fit your needs.

"Sales and Service from Coast to Coast"

EXACT WEIGHT SCALES

Industrial Precision

THE EXACT WEIGHT SCALE COMPANY

935 West Fifth Avenue, Columbus 8, Ohio

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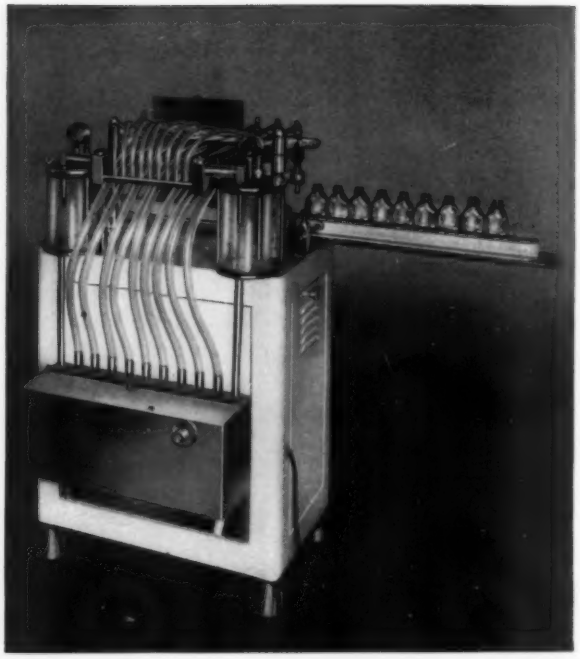

Photo of Rear view of Model B-49 Straight-Line Vacuum Filler. Now equipped with discharge feed bed as standard. Discharge conveyor optional.

The Most Automatic One-Man Filler . . .

A versatile machine for filling liquids. Quick, on-the-job changeover for any container up to gallon size and with efficient speeds on all size containers without pressure upon the operator.

Mechanical innovations introduce more comprehensive automatic machine operation for eliminating hand servicing. The product handling system is designed for quick clean-up after runs and the operating mechanism is simple, entirely automatic and substantially built for many years of enduring, uninterrupted filling service. The Model B-49 Bulletin will give you the interesting details; write for it today.

U. S. BOTTLERS' MACHINERY CO.

4013 N. Rockwell St. Chicago 18, Ill.

OFFICES: Boston—Dallas—Houston—Denver—Los Angeles—New York—Phoenix—Portland—San Francisco—Seattle—Tampa—Montreal—Toronto—Vancouver—Winnipeg—New Orleans—Philadelphia

EXPORT OFFICE: Toledo, Ohio

compact equipment, easier maintenance, easier and more trustworthy operation with less attention and shut-down time for cleaning. With the Spray Cooler and Concentrator in combination, the Niagara "No Frost Method" equipment permits refrigeration to temperatures as low as —30° F. without interruption for defrosting. From this point additional refrigerant coils may be used to obtain extreme low temperatures. There is no loss of effectiveness that is common to all refrigeration systems where frost progressively accumulates on refrigerant coils. The new concentrators will be manufactured in a wide range of sizes with water evaporating capacities ranging from ½ gallon to 75 gallons per hour. A single large concentrator will serve a battery of several large spray coolers. The manufacturer is the Niagara Blower Company, 405 Lexington Avenue, New York 17, New York.

Lab Tumble Jar

Andrew Technical Service, 3805 North Clark Street, Chicago 13, Illinois, announces a new model tumble jar. This unit is not only suitable for a wide range of industrial and laboratory applications in mixing, blending, as well as tumbling of small parts and materials, but conforms to specifications of the U. S. Quartermasters specifications, for dynamic absorption tests on textile coatings.

The unit includes a one gallon transparent glass jar having a leak-proof cap lined with tygon, which is almost universally resistant to corrosion. The gearhead motor rotates the jar at a speed of 55 RPM, but other speeds can be supplied to order. The unit is also available without motor for rotating by hand, and other sizes can be built special.

Pouring Liquids

The GS easy-pour tilter #15 provides a safe and easy method of pouring liquids from cans into small containers.

Built on scientific lines, it is designed to prevent accidents caused by spilling, splashing and carelessness in pouring liquids.

The cradle is made of steel, fits any standard 5 gallon can. All members are riveted or welded to insure a strong and durable device for this purpose. Excellent for mixing or pouring. Just pour together the ingredients you wish to mix, a few rocking motions and the "Easy-pour" and the content is thoroughly mixed.

The GS easy-pour tilter costs only $4.95, shipped on open account. Write today for complete information to the General Scientific Equipment Co., 2700 W. Huntingdon Street, Philadelphia 32, Pa.

Rotary Feeder

A new rotary airlock feeder for pneumatic materials handling systems has been announced by Prater Pulverizer Co., Chicago. This device is designed to provide a positive accurate method of feeding powdered and granular products into air conveying lines, for sealing

off air leakage at the discharge of dust collectors and other pneumatic equipment, and for feeding material at a predetermined rate into mixers, blenders and hoppers.

The Prater Model PAV Rotary Airlock Feeder has a cast iron body, and plates and rotor, all machined for accurate assembly. The rotor has machined slots for renewable rubber wiper strips to insure a tight, yet flexible, seal against air leakage. The rotor assembly is carried on ball bearings mounted on the end plates. The bearings are sealed against leakage on the outside with an additional oil seal on the material side to prevent leakage into the feeder and keep dust out of the bearing.

The model PAV-8 Feeder is equipped with a ⅓ horsepower dual voltage enclosed type motor reducer. The PAV-10 Feeder is equipped with a ½ horsepower dual voltage enclosed type gear motor complete with chain drive and guard.

The manufacturer recommends this Rotary Airlock Feeder in the processing of ball clay, China clay, diatomaceous earth, kaolin, graphite, limestone, whey powder, calcium carbonate, sulphur, Fullers earth, ochre, volcanic ash, bronze powder, bauxite, carbon black, salt, barium carbonate, marl, talc, sugar, cocoa, gypsum, silica, manganese, sulphate, and Phenolic molding compound.

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Modern Equipment Company, Inc. of Omaha, Nebraska, manufacturers of Industrial Handling Equipment since 1907 are pleased to announce completion of their new and complete catalog on materials-handling equipment. This new catalog covers the entire

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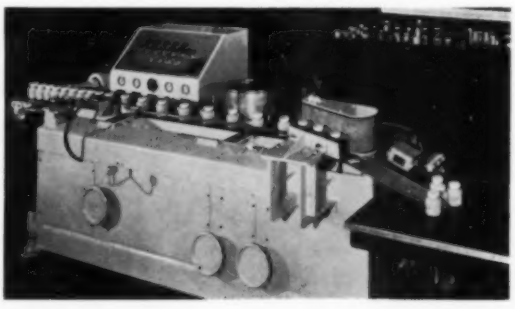
This new two-color, easy-to-read catalog lists all technical specifications and recommendations on the MECO line of handling equipment so that customers can easily choose the best truck for the right job.

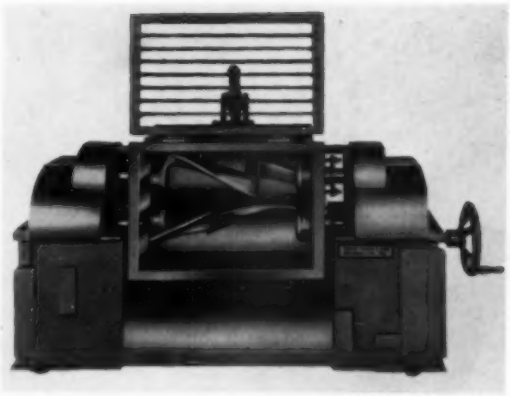
Thermoplastic Labeler

Featured at the Canner's Show in Chicago recently, the New Jersey Machine Corporation exhibited the Model 160 thermoplastic labeler which labels "without glue". Operating economically at speeds from 75 to 300 a minute, the Fully Automatic Label-*DRI* was demonstrated applying labels to mustard jars.

Also featured at this exhibit was the result of considerable research by the original developer of the thermoplastic labels used in developing the New Jersey Machine Corporation manually operated Label-*DRI* as well as the Fully Automatic. Eight packages were decorated with various themes indicating the super tenacious hold of Nashua's thermoplastic label on paper, wood, metal, glass and plastic and the features brought out indicated that they were "The all climate heat seal export label" which is of especial importance in view of any packages or products that must be labeled for use by the United States armed forces or for the export trade because of their impervious character. For government use, they advocate application of the label after a steam jet to give a pre-stretch before applying the label which will give the tightest bond possible because of the nature of the plastic and the natural shrinkage while setting. Heat or cold, dry or humid climates, abrasions, emersions and corrosion are some of the conditions which are, to an exceptional degree, offset by the use of this special labeling process. Nashua's test also indicated that their Pervenac WP-1 is avoided by insects and rodents.

Even without the steam jet feature there is an exceptionally tight bond between label and product accomplished by the Label-*DRI*. This is partly due to the fact that the thermoplastic adhesive covers the full surface of the label and also that the nature of the adhesion makes it extremely difficult to remove the label under any normal conditions. The Model 160 shown in the photograph operates on a control which prevents the activation and delivery of any label unless there is a product on the line ready to receive it.





New Ross Kneader

Reports from manufacturers who have been using the new Charles Ross & Son Company (Classon Ave., Bklyn., N. Y.) 41L Heavy Duty Kneader and Mixer for several months indicate extreme versatility with excellent results.

Actual production conditions have proven the top performance of the 41L where mixing and dispersing operations are combined with fine dispersion and increased output. This is because many new features have been incorporated to give the unit greater flexibility and versatility.

The 41L is double-bladed, with different stirrers available for operation at the same or differential speeds. Quick-dumping of material is made easier through an arrangement permitting manual, hydraulic or motorized tilting. In addition, an optional two-speed motor expedites thinning down prior to dumping.

There are other optional features that make the 41L one of the most adaptable units available today. These include various types of covers and jackets for both cooling and heating operations plus a variety of sizes up to 150-gallon capacity.

Electronic Controls for Packaging Processes

How to utilize electronic controls on a packaging line in order to bring about automatic statistical control of net weights is ably described by Roger L. Merrill of Battelle Memorial Institute in a pamphlet report recently released by the Packaging Institute for sale at $1.00 a copy.

This 16-page discussion, illustrated by eight line drawings and one half-tone, explains the theory of statistical control, and asserts that manual measurements, calculations and plotting are much too slow and cumbersome for practical use on high speed packaging lines.

The manual control chart method is very effective for revealing assignable causes of variation but electronic measuring and selectrol devices can weigh every package on a high speed line and automatically adjust filling machines when a predetermined shift in the average weight takes place. This permits a reduction in the extent of overfilling with consequent economy without incurring the hazard of underfills.

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Mineral Oils in Cosmetics

In his report on the stability of mineral oils in toilet and cosmetic preparations, as cited in *Soap, Perfumery and Cosmetics* (24:38, 1951), the British authority, W. W. Myddleton observes that the white oils are normally chosen because they are available practically free from odor and color and long experience has shown them to be without harmful physiologic action on the skin. He also notes that the stability of preparations containing mineral oils is to some extent determined by the stability of the oils themselves. Window displays bring about exposure to light and heat, while consumer use habits are also responsible for exposure to air. Under such conditions, the mineral oils undergo undesirable changes, such as a turpentiney change of odor, darkening of color, sedimentation in clear oils and—in emulsions—changes that lead to breakdown. The extent of such changes and the time taken for them to occur depend on various factors, including the nature of perfumes and emulsifiers, as well as of the mineral oils.

According to Myddleton, white oils exposed to light in contact with air deteriorate in odor, color and clarity to an extent which appears to be closely related to the aniline point of the oil and the nature of the fluorescence produced by ultra-violet light. Peroxides and free acids are developed during the deterioration but the stage of development is not a measure of the general deterioration. A low specific gravity and low viscosity both tend to cause more rapid deterioration, presumably because migration from the surface into the mass of oil occurs more readily. Water-in-oil emulsions also deteriorate at a rate depending to some extent on the fineness of the globules. Deterioration is indicated by development of odor and color and by growth in globule size and, finally, by separation of oil and water. Globule breakdown occurs near the surface in the first instance, and acidity develops similarly. The stability of the emulsions is closely related to the aniline point and character of ultra-violet fluorescence and, provided that consideration be given to the effect of specific gravity and viscosity, the stability of the emulsion to light and heat can be assessed by the aniline point and fluorescence of the oil.

He points out that the effect of specific gravity and viscosity is also shown in the oils themselves. Provided that the specific gravity of an oil in water-in-oil emulsions lies between 0.855 and 0.875 at 60°/60° F., and the viscosity between 120 and 155 Redwood seconds at 70° F., the aniline point should be not less than 98° C. The oil should give not more than a faint greenish fluorescence under the ultra-violet lamp. It is noted editorially that the aniline point is the lowest temperature at which equal volumes of freshly distilled aniline and the oil under test are completely miscible.

Standards for Zirconium Silicate

The Toilet Goods Association Specification No. 37, for zirconium silicate, was issued on February 16, 1951. According to this set of standards, zirconium silicate is defined as a white crystalline powder consisting essentially of Z_2SIO_2. Requirements with respect to color, odor, fineness, acid- and alkali-soluble materials, loss on ignition, pH and moisture content are given. An assay method, together with procedures for determining the presence of arsenic and lead are included.

Syrup of Choline and Methionine

In response to an inquiry for an improved syrup of choline and methionine it is suggested in the *Journal of the American Pharmaceutical Association*, Practical Pharmacy Edition (12:111, 1951) that the following modification be used:

Choline chloride	**10 Gm.**
***dl*-Methionine**	**10 Gm.**
Diluted hydrochloric acid	**22 cc.**
Distilled water	**18 cc.**
Syrup of cherry, to make	**100 cc.**

Dissolve the choline chloride and methionine in the water and hydrochloric acid using gentle heat. Add 36 cc. of the syrup of cherry and continue warming to insure that all solids are dissolved. Cool and make up the volume with syrup of cherry. This furnishes a clear and stable preparation. If desired, it is possible to substitute methionine hydrochloride in the above formula and delete the hydrochloric acid. This would give an equivalent preparation.

Cosmetic Astringent Preparation

According to British Patent 645,038, granted to Elizabeth Arden, Ltd., it has been found that an astringent composition, containing an aluminium chlorohydrate as an essential ingredient, has an astringent and deodorizing action which is without irritating effect on the skin and without harmful effects upon fabrics. Such a composition may consist, according to this patent specification, of:

Stearic acid	**200 parts**
Mineral oil	**20 "**
Beeswax	**20 "**
Glyceryl stearate	**120 "**
Sodium lauryl sulphate	**24 "**
Propylene glycol	**100 "**
Water	**800 "**
Aluminium chlorohydrate	**300 "**
Water	**300 "**

It is claimed that this formula, which is given only as an illustrative example, yields a product of uniform consistency which spreads easily, with little perceptible residue, when applied to the skin. The composition is of even and uniform texture, of pleasant appearance and possesses effective astringent action.

New Eastman Chemicals Catalog

The Tennessee Eastman Company, Division of Eastman Kodak Company, announces the publication of their 1951 catalog of Eastman industrial chemicals. The 1951 edition includes specifications, properties and typical uses of all of the fifty-five industrial chemicals manufactured by the company. Of particular interest in the new catalog is the inclusion of solubility data covering twenty of the twenty-three Eastman aromatic compounds. A two page chart listing those fields in which each of the Eastman industrial chemicals finds use has been added to the edition just released.

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Sodium cellulose sulfate, the new water soluble cellulosic announced by Tennessee Eastman during 1950, appears for the first time in the catalog.

Copies of the 1951 edition are available upon request to the company at Kingsport, Tennessee.

Effective Palatable Expectorant

Recently made available by the Bureau of Professional Relations of the Florida College of Pharmacy is the following formula for Tripelennamine Syrup with Menthol, F.F.:

Tripelennamine hydrochloride	**0.320 Gm.**
Ammonium chloride	**3.120 Gm.**
Sodium citrate	**1.300 Gm.**
Chloroform	**0.500 cc.**
Menthol	**0.004 Gm.**
Syrup of cherry	
Syrup of wild cherry, equal parts of each, to make	**120.000 cc.**

The dose is one drachm every three to four hours as directed.

It is pointed out that Tripelennamine Syrup with Menthol, F.F. offers a palatable and well tolerated combination of effective expectorants useful in acute and subacute inflammatory conditions, bronchitis and in addition relief to those patients where an antihistaminic is indicated.

Improved Nasal Solution

There is a great need, says E. A. Thacker (*Eye, Ear, Nose & Throat Mo.* 29:609, 1950), for the standardization of various nasal medicaments more nearly to fit the ideal physiologic principles and needs in aiding the upper respiratory tract membrane in combating disease. With these principles in mind, the following formula has been developed. It may be used alone or in combination with certain other drugs:

Phenazoline hydrochloride	**0.125 Gm.**
Phenylephrine hydrochloride	**0.250 Gm.**
Sodium bisulfate	**0.0125 Gm.**
Dibasic sodium phosphate	**0.333 Gm.**
Potassium acid phosphate	**0.167 Gm.**
Potassium chloride	**0.344 Gm.**
Sodium chloride	**0.218 Gm.**
Methylcellulose (4000 cps)	**0.100 Gm.**
"Zephiran" solution 1:5000 to make	**100 cc.**

This solution is stable and has a pH of 6.75. It is non-irritating to the upper respiratory tract mucosa, and has a slightly salty taste. It does not irritate the conjunctiva. The primary formula is incompatible with streptomycin and tyrothricin, or with any other substances which are incompatible with phosphates.

Thacker has found this formula satisfactory in clinical trial, and believes that it approaches the ideal medicament for nasal and sinus diseases. It can be compounded readily.

Data on Aluminum Chlorhydroxide Complex

The Reheis Company, Inc., Berkeley Heights, N. J., has just issued a 16-page descriptive catalog on their product, "Chlorhydrol." An aluminum chlorhydroxide complex, Chlorhydrol is a mildly acid astringent and anti-perspirant specially formulated for the pharmaceutical and cosmetic industries. It is claimed that Chlorhydrol represents the first major technical advance made in this field in a number of years. Its inclusion in anti-perspirant preparations is said to enable the manufacturer to maintain the necessary astringent qualities while eliminating the corrosive properties inherent in the older normal aluminum salts. It is also reported that the use of Chlorhydrol eliminates the necessity for buffering agents.

Guar in Pharmaceuticals

Writing in the *Bulletin of the National Formulary Committee* (19:4, 1951), G. E. Osborne and C. O. Lee state that the introduction of guar flour and mucilages prepared from it by the paper industry has evoked interest in the possible use of these products in certain pharmaceutical preparations. Guar is native to India, where it has been grown for centuries for food and feed. It is an annual plant, cultivated in light, sandy soil. There are many varieties of guar, and their physical properties may vary, but in general, the plant grows from four to eight feet in height; its slender stalks bear large leaves and small pods, bean-like in shape, which contain pebble-shaped seeds in considerable abundance. It can be grown successfully in the semi-desert areas in the southwestern United States and the seeds can be harvested mechanically and are dry-milled to produce guar flour. The endosperm of guar seed consists principally of a galactomannan polysaccharide. It is therefore analogous to the endosperm of locust beans (*Ceratonia siliqua*) and to galactomannans from other sources.

In studies to determine the usefulness of guar in pharmacy, Osborne and Lee undertook a series of investigations. One result of this study indicates that guar flour has definite mucilaginous properties which can be used to advantage in certain types of pharmaceutical preparations. However, guar mucilages are not permanent preparations, but they can be preserved satisfactorily with 0.2 per cent benzoic acid, as in the following examples:

	No. 1	No. 2
Guar Flour	**10 Gm.**	**30 Gm.**
Benzoic Acid	**2 Gm.**	**2 Gm.**
Alcohol	**10 cc.**	**30 cc.**
Distilled Water, to make	**1000 cc.**	**1000 cc.**

Dissolve the benzoic acid in the alcohol and add this solution to the guar flour, wetting it thoroughly. Finally add with constant stirring sufficient distilled water to make the product measure 1000 cc., and set aside until the mucilage is homogeneous.

It was found that mucilages prepared from guar are compatible with acids and with solutions of electrolytes and heavy metal salts, but in the presence of strong alkali they will turn dark and, on standing, will form heavy curds. Guar mucilages are incompatible with alcohol and acetone.

Guar flour and its mucilages were also employed in typical pharmaceutical preparations, and it may be concluded that: (a) Guar and its mucilages have little or no emulsifying properties. Emulsions can be formed in the presence of alkali, but these emulsions are not permanent. (b) Guar and its mucilages have remarkable powers of aiding the suspension of oils, emulsified oils, or saponified oils; these suspensions have unusually good stability. By combining small amounts of guar flour with emulsifying agents, particularly acacia, the stability of emulsions prepared from the combination can be considerably improved over those made with the emulsifying agent alone. (c) The suspending powers of guar and its mucilages with respect to solid phases are limited. (d) Guar mucilage is not a good levigating agent; when mixed with dry powders, it tends to form a slime. This objectionable tendency can be overcome in part by levigating first with a small amount of water and then incorporating the mucilage. (e) Guar flour can be used as a satisfactory pill excipient. (f) Guar flour is an excellent gelling agent, forming better jellies more quickly than the official (tragacanth) gelling compounds. (g) Guar mucilage can be used to good advantage as a binding agent in tablet manufacture.

ADVANCING THERAPY

Cortisone Suspension by Mouth

In the belief that a suspension of cortisone taken orally should be absorbed from the gastrointestinal tract as readily as cortisone taken in tablet form, E. P. Engleman, M. A. Krupp and P. Kunkel (*J. A. M. A.* 145:402, 1951) decided to test the efficacy of such a suspension. They point out that the injectable suspension of cortisone has a highly disagreeable taste, which can be adequately disguised with one of the standard vehicles, such as syrup of cherry or orange. The desired quantity of cortisone suspension is added to a measured volume of vehicle, the proportions so adjusted that each cubic centimeter of the mixture contains 1 or 2 mg. of cortisone. They have been able to dispense a week's supply of the drug without noting any variation in potency from one dose to the next. The uniformity of clinical response further indicates that the cortisone suspension in syrup retains its effectiveness for at least a week.

In their preliminary trial the oral administration of injectable cortisone has proved so satisfactory that it has almost completely supplanted the intramuscular route. The minimal effective oral dose of cortisone may be slightly larger than the intramuscular dose, but the disadvantages of a larger maintenance dose may be offset by the significant advantages of oral administration.

It has been that the effect of cortisone when taken orally is prompt and of short duration, whereas the action of a dose given intramuscularly is slower to appear and may last for a number of days. The fact that oral administration of cortisone usually produces a therapeutic effect within a few hours is of obvious advantage in the treatment of acute disease. The brief action of an oral dose permits prompt termination of the effect of cortisone should dangerous reactions occur.

Although it is felt that the oral route is the method of choice for therapy with cortisone, unless contraindications to oral medication exist, it is stressed that there is no reason to believe that the hazards of cortisone therapy are reduced by use of the oral route of administration.

Estrogen Cream for Acne

In discussing a new approach to the treatment of acne vulgaris, I. Shapiro (*Arch. Dermat. & Syph.* 63:2251, 951) remarks that although more than 80 per cent of clinically significant cases of the disease respond to orthodox management, the occasional stubborn relapsing type should be given the benefit of therapy by local application of estrogen substances. In a study of 25 such patients, remissions were observed in 60 per cent of cases of acne vulgaris, previously recalcitrant to orthodox measures, after local application to the lesions of a cream containing 2.5 mg. of water-soluble conjugated estrogenic substances per gram of vanishing cream base. Since only 10 to 15 per cent of the estrogens are absorbed from ointments, relatively high quantities of the cream were used in this study in order to get the desired effect on the target area. Within six weeks oiliness, papules and pustules had appreciably subsided in 15 of the patients. In seven other patients the response was less prompt. No harmful effects were noted after four to six month's application of estrogens.

Dromoran for Postoperative Pain

A new synthetic morphine analogue has recently been introduced into clinical medicine. Chemically designated as 3-hydroxy-N-methyl morphinan hydrobromide, it is referred to as Dromoran by E. Keutman and F. F. Foldes (*New England J. Med.* 244:286, 1951) who made a comparison of the analgesic effect of Dromoran with that of morphine in postoperative pain, in a large number of patients. Side effects were also carefully observed and recorded.

In their investigations Dromoran (5 mg.) and morphine sulfate (10 mg.) were administered subcutaneously to 311 and 312 patients respectively, for postoperative pain. The first postoperative dose of Dromoran gave complete relief in 66.5 per cent of the cases, as compared to 46.2 per cent with morphine sulfate. Following 1336 injections of Dromoran, complete relief was obtained in 75.0 per cent of cases; after 1097 injections of morphine sulfate, complete relief was obtained in 54.7 per cent. The average duration of analgesia produced by Dromoran was 6.1 hours, as compared with 5.8 hours with morphine sulfate. The incidence of nausea and emesis was less with Dromoran than with morphine.

Longer-Acting Testosterone Preparations

It is well known, say W. J. Eversole, J. H. Leathem and H. Schraer (*Endocrinology* 47:448, 1950) that the duration of response elicited by a given dose of hormone depends on many factors, among which are the vehicle used, introduction of chemical radicals and the physical state of the preparation. These workers have made a series of studies on the "depot action" of testosterone and testosterone propionate. They were designed to test, under standardized conditions, the effects that these various factors would have in modifying the response of the seminal vesicles and ventral prostate lobes to male sex hormone. They found that a single subcutaneous injection of 5 mg. of testosterone propionate in the form of macrocrystals in methyl cellulose or in an emulsion stimulates the seminal vesicle and ventral prostate glands of castrate immature rats to a greater extent and for a longer period of time than does a single injection of testosterone (free or the propionate) adsorbed on aluminum phosphate. All of the preparations tested are much longer lasting in their effects than is the commonly used solution of testosterone propionate in oil.

Antihistaminic of Vegetable Origin

Having previously reported that the tannic acid extracted from gallnuts has a decided antihistaminic effect, A. Kovacs and L. Szabadi (*Arch. Internat. Pharm. et Therap.* 84:276, 1950 through *J. A. M. A.* 145:679, 1951) subsequently found that this effect is exerted not by the tannic acid but rather by the impurities it contains. They attempted to isolate this substance from the gallnut but were able to purify it only to a certain extent. The substance that was obtained by fractionation with lead acetate proved in guinea pig tests to be ten times more potent than the commer-

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cial tannic acid. If the ordinary watery extract of gallnuts is administered repeatedly (six to 10 times) by the parenteral route to animals, a strong and persistent antihistamine effect can be observed, and the adrenals of these animals usually become hypertrophied. The most effective of the synthetic antihistamines gives protection for a maximum of only 10 hours, whereas the active fraction of the gallnut acts for 18 to 20 hours. Should the gallnut extract become available for therapeutic use, this prolonged effect would represent a great advantage in the treatment of allergic diseases.

Treatment of Alopecia Areata

In the opinion of N. P. Anderson (*Postgrad. Med.* 9:157, 1951) the successful treatment of the type of baldness known as alopecia areata has more to do with art than the science of medicine. The host of entirely different therapeutic procedures, all of which have been used with considerable success, testifies to the truth of this statement. Many if not most of the patent medicine hair restorers, rejuvenators, mange cures, and the like owe their chief claim to fame to their success in causing the regrowth of hair in this capricious condition. Nevertheless the condition can and should be treated, because of its psychogenic effect upon the patient.

Among the office procedures which may be used is the application of ultraviolet light. This may be administered by means of the ordinary quartz light, the cold quartz light, or the carbon arc light. For local use at home the patient may be given stimulating and antiparasitic preparations in ointment form and containing 3 to 5 per cent of sulfur, *or* 3 to 5 per cent ammoniated mercury to either of which preparations 1 to 2 per cent of salicylic acid or 1 to 2 per cent resorcin, or both, may be added. Actually it probably makes very little difference what is used locally as long as both the patient and the doctor believe in its efficacy and as long as the preparation is applied with moderate friction once or twice daily. For those who prefer a stimulating lotion the following may be applied once or twice daily.

Bichloride of mercury	**0.12**
Resorcin	**4.00**
Chloral hydrate	**4.00**
Tincture cantharides	**15.00**
Alcohol, 70 per cent	
Distilled water, equal parts of each, to make	**240.00**

Note: Mono-acetate of resorcin should be used instead of resorcin in patients with blonde hair.

In the majority of cases of alopecia areata of mild to moderate grades of severity the above measures usually are followed by a regrowth of hair.

Basic Vitamin Formula

In his comprehensive and indicative discussion of recent advances in the diagnosis and treatment of deficiency diseases, T. D. Spies (*J.A.M.A.* 145:66, 1951) presents the following basic combination of synthetic vitamins for the treatment of the clinical syndromes of sprue, beriberi, pellagra, riboflavin deficiency, scurvy and certain macrocytic anemias:

Folic acid	**5 mg.**
Thiamine	**10 mg.**
Nicotinamide	**150 mg.**
Riboflavin	**10 mg.**
Ascorbic acid	**150 mg.**
† Vitamin B_{12} and "activator"	**10 micrograms**

† Equivalent to 10 micrograms of vitamin B_{12} and intrinsic factor adequate to form its conjugate.

This, it should be noted, constitutes the daily oral dose.

Oral Penicillin in Children

It has been shown, say S. A. Doxiadis, J. L. Emery and S. M. Stewart (*Brit. Med. J.* 1:16, 1951), that satisfactory bacteriostatic blood levels are attained in infants by the oral administration of penicillin. The oral use of penicillin in infants has therefore been widely adopted. In other children and adults the conditions for absorption of penicillin from the gastro-intestinal tract are not equally favorable, probably because of the higher gastric acidity. Owing to the conflicting reports on the oral dose required and on the value of antacids it was felt that a study of these points was necessary before penicillin could be used by mouth for therapeutic purposes.

In their investigation an attempt has been made to estimate the amount which had to be given in order to obtain a serum level of at least 0.06 unit per ml. three hours after penicillin was taken. It was only when 6,000 to 6,999 units per pound of body weight were given orally that the desired effect was achieved in all but one of 30 children (97 per cent). It would seem that doses smaller than 6,000 units per pound without antacid cannot be relied upon to maintain a bacteriostatic serum level of at least 0.06 unit per ml. over a period of three hours.

This study demonstrates the value of simultaneously administering an antacid; sodium citrate, 3 Gm. in 30 cc. (one ounce) of water, being used as the antacid. With a dose of 2,000 to 5,999 units of penicillin per pound of body weight, a blood level of 0.06 unit per ml. or over was obtained in only 54 of 80 test doses (67 per cent) without antacid, compared with 73 of 80 test doses (91 per cent) when antacid was given.

The results show that, when no antacid is given, at least 6,000 units of penicillin per pound of body weight must be administered to ensure a level of 0.06 unit per ml. or over at three hours in more than 90 per cent of the children. When an antacid is given the minimal dose likely to have a similar effect, as it appears from the table, is 3,000 units per pound of body weight. On this basis, the addition of an antacid would permit a reduction of approximately 50 per cent in the dosage of penicillin.

Flural for Reducing Dental Caries

A new method of fighting tooth decay through the use of flural, a chemical substance that regulates automatically the amount of decay-resistant fluorine in water systems, was described by W. E. White. Speaking at 119th meeting of the American Chemical Society, in Cleveland, he said the substance, a compound of alum and fluorine, would discharge the latter element until the water supply contained the safe, maximum concentration of 1.5 parts per million. If that proportion were exceeded flural would remove the excess. The new substance, he said, was cheaper and safer to handle than the more active fluorine compounds now introduced into some water systems.

Bacitracin and Penicillin in Subacute Bacterial Endocarditis

The resistance to penicillin on the part of some of the streptococci isolated from cases of subacute bacterial endocarditis is notorious. The possible synergistic effect of bacitracin when used with penicillin, as indicated in the report of I. F. Volini and E. R. Kadison (*Amer. Pract.* 2-13, 1951) is thus of great interest. They found that all of three patients with subacute bacterial endocarditis responded dramatically when combinations of bacitracin and penicillin were administered. None of the patients showed any evidence of renal toxicity, such as retention of the non-protein nitrogen in the blood, albuminuria, hematuria or casts in the urine. The blood levels in two cases demonstrated the synergistic action of these two drugs when used together.

Twelve Years of the New Drug Section

(*Continued from page 597*)

correspondingly elevated. The applications of today reveal this in most cases.

Passing over without comment the requirements regarding components and composition of your new drug, we come to Sec. 505 (b)(4) "a full description of the methods used in, and the facilities and controls used for, the manufacture, processing, and packing of such drug". Frankly, today we are putting much more emphasis on full compliance with these requirements than was once the case, and we are therefore, asking much more than formerly. We believe these requirements very clearly go to safety of the product. Unless a product is clearly defined, unless there exist adequate procedures which are used for the maintenance of the identity, strength, quality and purity of a drug, there is no assurance that the product as eventually delivered for introduction into interstate commerce, will correspond to the one on which investigations have been made and conclusions as to safety for use reached. Unless this assurance exists, the new drug application will have failed of its purpose.

The Act provides that such samples as the Administrator may require are to accompany the application. We have not in the past required much under this Section, but a part of our present program involves some clinical use by our medical officers when this is practicable and desirable. This is not to supply manufacturers with additional information for their applications. Rather it is to be done in the hope that our own judgments and criticisms can be sounder and more intelligent, with at least a modicum of personal experience behind them.

Finally, there is the matter of the labels and labeling. With relatively few exceptions new drug applications relate at least initially to prescription items. Unless they are for parenteral administration these may not carry directions for use. The directions for use then go in the brochure which is made available separately to the physician. Manufacturers obviously spend a great deal of time in the preparation of these. So do we in their review. We believe the statements in them regarding indications for use should be based on the experience reported in the application. This is not saying that further uses may not be investigated. There is no reason why manufacturers should not continue to stimulate research on their products. But we believe there is a difference between suggesting to a competent investigator that he explore the possibilities further, and saying to the medical profession generally that this new agent is indicated for conditions in which it has not been adequately investigated.

Safety is a relative expression. There is some element of hazard in almost any drug. In some cases the hazard may be of considerable magnitude. In others it may be negligible. The physician who prescribes digitalis or gives a spinal anesthetic, or an intramuscular injection of a heavy metal, or a vaccination, measures the hazard against the needs of the patient. Consciously or unconsciously he takes a calculated risk. It has been our position, with respect to new drugs, that one of the criteria for evaluating the information in a new drug application is that it makes possible such a calculation. We believe the maximum of safety is attained when the physician can weigh the value of the drug for therapy, both against the possible toxic effects of this same drug as well as against risk and effectiveness of other agents which might be available. To this extent we give consideration to evidence for efficacy, although the application is generally considered to go to safety only.

From June of 1938 to the end of February of this year nearly 8000 new drug applications have been submitted, including those in the field of veterinary medicine. Nearly 5000 of these have been permitted to become effective. About 1500 were initially incomplete and were never completed. Some 500 of this total of 8000 were considered not to be new drugs after the application had been examined. Today most applicants ask our views before submitting the application, if there are reasonable grounds for doubt as to the new drug status.

In the first four years 11 were denied effective status. Formal hearings were set in 7 cases. The applicant failed to appear in three of these, in two the applications were withdrawn during the hearing. In two the denial action was confirmed by the hearing officer.

No application has gone to a hearing in recent years. If our medical officers have indicated that in their opinion the information in an application was not sufficient to serve as the basis of a positive conclusion as to safety, the application has been withdrawn, usually for the purpose of developing further information. We appreciate this cooperative attitude, and feel that the purposes of the Section are served as well as by the more formal procedures.

I should like to mention certain questions frequently asked. One of these has to do with the length of time a particular drug remains a new drug. We believe Section 201 (p) (2) covers this point. A drug remains a new drug when, as a result of investigations made on its safety for use, it has been so found, but when it has not been used for a material time or to a material extent. The fact that a product has been introduced by one member of industry which, in view of his reputation, is taken as evidence that he has submitted an application which has been allowed to become effective—this fact does not relieve another manufacturer of the necessity for submitting his own application.

A matter which has given us considerable concern recently has been what we believe to be an abuse of the regulations regarding the distribution of drugs for investigational purposes. As you know, these regulations permit sending of research material to investigators if all of the relatively simple requirements set down in the regulations are met. The purpose of the exemption of this research material from the requirements of Section 505 is clear. It is to permit the development of the information necessary to determine whether a product rates further study, and if so, the collection of the in-

(*Continued on page 664*)

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PATENT THOUGHTS AND TRENDS

by Thomas Cifelli, Jr.,[*]

Patent Attorney

Patent Office Criticism

These are days which truly try men's souls. Re-examination and re-evaluation of our American institutions are therefore musts in order that the best in our national life may be brought out and strengthened if need be, so that if we and the free world are put to a test again our chances of survival will be greatest.

This being so, it goes without saying that it is all to the good to expose our patent system to critical attention at this time.

In order to do the most good this attention should not be restricted to members of the patent bar, but should also include groups which contain numerous inventors. One such group is the American Chemical Society, which through its committee on Patent and Related Legislation keeps its eye on the patent picture. In line with its basic objectives, this committee joined with another group in the American Chemical Society to sponsor a symposium on patents at the April, 1951 meeting of the American Chemical Society. Judging from the abstracts of the papers presented at the symposium it would appear that on the whole worthwhile ideas were presented and thereby a net gain to the patent system resulted. However, there was one disquieting note, as far as this writer is concerned.

Reference is made to a paper which gave the results of inquiries sent out to the heads of some seventy-five companies which are active in the chemical field and which appear as assignees of the major proportion of the chemical patents issued. These inquiries, which were intended to be answered by the companies' own patent departments, were not in the form of questionnaires, but solicited both general and specific criticisms and suggestions, based upon the actual experiences of the companies.

According to the *Chemical and Engineering News*, of April 16, 1951, some of the recent improvements in Patent Office practice were commended and it was recognized that a major source of difficulties is the lack of sufficient funds for the Patent Office to do its work.

However, it was felt that the Patent Office Examiners give unnecessary emphasis upon legal requirements and should arrive more quickly at the heart of each case, that is, whether or not a patentable invention has been presented. The respondents felt that it was particularly important to get at the merits of the invention in the first action of the Patent Office and apparently were critical of the Patent Office because a reaction from it does not come for several months after the application is made.

Now, if one reads the foregoing criticisms, they sound valid. If one looks into the matter further, the criticisms still stand up. Certainly, no one could argue with the idea that it would be very nice to know within a short time, say a week or two, after filing an application, whether the application were going to be allowed or not. The point is that the criticism should not be directed against the Patent Office for the situation which actually exists. The Patent Office is merely doing its job with whatever tools it has.

I think I detect the reader saying that this is just a case where a patent attorney is coming to the defense of the Patent Office because he has an axe to grind. Let us consider a matter of simple arithmetic and I think that the true situation will be pretty clear.

Because of the large number of patent applications which have to be examined, the time which an Examiner can give to a study of any particular case is necessarily limited. In the Chemical Division it is not uncommon for an Examiner to be able to spend not more than a half day on each new application. This is not to say that he is told that he cannot spend any more time on the case. He knows full well however that if he does spend a lot more time on each case it will mean that applicants will have to wait for an even longer period than is now the case before they hear from the Patent Office. So, if we start with the admittedly inadequate amount of time and permit the Examiners to spend twice as much time on each case on the average and set as our goal a period of seven or eight days instead of seven or eight months which at present are required before an applicant hears from the Patent Office it will mean that the examining staff of the Patent Office will have to be increased *forty-fold*. While this would seemingly solve the problem of fast and perhaps final Patent Office actions, one shudders to think what the Patent Office critics would think about the increased costs—and hence taxes.

Look at the position of the Patent Office Examiner from another angle. How would a chemist like to be in the position of having to digest and evaluate a technical disclosure in a matter of four hours or so? And that is only one-half of the job of the Patent Examiner because he must consider not only the technical features of the patent application but also its legal aspects. For, we cannot lose sight of the fact that a patent is not merely a technical document but is also a legal grant and no matter how thorough and excellent a patent is from the technical point of view it is literally of no value to its owner if it has no legal standing.

I for one do not believe that the Patent Office is perfect but let us be fair in our criticism and let us not forget that in spite of the handicaps under which it is operating its legally- and technically-trained Examining Corps is doing the outstanding job in the whole world in its field.

Patented Skin Preparations-V†

U. S. 2,398,295—issued April 9, 1946 to A. K. Epstein et. al. and assigned to The Emulsol Corporation.

Emulsions or dispersions of excellent character and stability are said to result from the use of a combination of certain agents. These agents comprise an inti-

[*] Gaylor, Cifelli & Jurick, Newark, N. J.

† I-This Journal, November, 1950
II- " " , February, 1951
III- " " , March, 1951
IV- " " , April, 1951

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mate mixture of (1) certain cation-active substances and (2) non-ionic substances, the non-ionic substances substantially predominating in amount over the cation-active substance.

Examples of the cation-active substances include octyl pyridinium iodide; dodecyl pryidinium bromide; hexodecyl pyridinium iodide; cetyl trimethyl ammonium chloride, etc.

The non-ionic agents comprise partial esters of aliphatic polyhydroxy substances, such as glycerol, glycols, pentaerythritol, etc. These are esterified with higher molecular weight carboxylic aliphatic acids.

Claim 1 is illustrative:

An emulsion containing an oleaginous material, an aqueous material, and small proportions of (1) a cation-active substance in the form of a pyridinium halide having directly attached to the nitrogen thereof a hydrocarbon radical containing at least 8 carbon atoms, and (2) a non-ionic substance in the form of a carboxylic acid derivative of an aliphatic hydroxy compound, the carboxylic acid radical of which contains at least 8 carbon atoms, said derivative containing at least one unesterified hydroxy group in the radical of the aliphatic hydroxy compound.

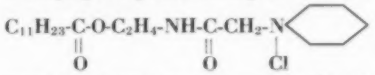
U. S. 2,398,296—issued April 9, 1946 to A. K. Epstein et. al. and assigned to the Emulsol Corporation.

Certain modifiers are suggested in the preparation of emollient compositions in order to prevent the separation of substances such as monoglycerides in neutral or acid aqueous dispersions.

Structural formulae of typical modifiers are given in the patent.

The following example is taken from the patent:

(a) 90 grams of the stearing acid monoester of diethylene glycol and 10 grams of a modifying compound having the formula

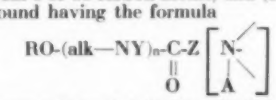


were heated together at approximately 100 degrees C. until a clear solution was obtained. The mass was then allowed to cool.

(b) A lotion was made by admixing water, mineral oil and the composition of part (a) of this example, in the following proportions by weight: 90 per cent water, 5 per cent mineral oil, 5 per cent composition of part (a).

Claim 1 is illustrative:

An emollient composition including water and minor proportions of (1) an aliphatic polyhydroxy substance incompletely esterified with a fatty acid having from 8 to 18 carbon atoms, and (2) a compound having the formula



wherein R is an aliphatic radical containing at least 4 carbon atoms, alk is hydrocarbon, Y is a member selected from the group consisting of hydrogen, alkyl, cycloalkyl, alkoxyl, aralkyl, aryl and alkylol, Z is the carbon-hydrogen residue of a carboxylic acid, A is an anion, m and w are whole numbers, and the three valence bonds attached to nitrogen are linked directly to carbon, compound (2) exceeding the amount of compound (1) in said emollient composition.

U. S. 2,412,535—issued December 10, 1946 to E. L. Richardson et. al. and assigned to Colgate-Palmolive-Peet Co.

The perennial problem of overcoming the corrosive effect of anti-perspirants such as aluminum chloride and aluminum sulphate is tackled by this patent. The patentees suggest the use of neutralized salts of acids of phosphorus, such as tertiary orthophosphates. Metaphosphates are said not to be suitable since they are not stable in solution but gradually hydrolyze to form primary orthophosphates. The primary and secondary orthophosphates are also said to be unsuitable.

The inhibiting salt may be selected so as to serve also as an additional antiperspirant agent. In such preparations the cation of the inhibiting salts should be aluminum ion or the cation of some other perspiration-inhibiting agent. A desirable preparation is said to contain aluminum sulphate or chloride and aluminum orthophosphate or aluminum pyrophosphate. Proportions of up to two to three mols of aluminum orthophosphate to one mol of aluminum sulphate are recommended where the garments which have come into contact with the preparation are heat-pressed.

Claim 1 is illustrative:

A perspirant inhibiting or retarding composition comprising a water-containing vehicle, an aluminum salt selected from the group consisting of aluminum sulphate and aluminum chloride, and a corrosion inhibiting compound selected from the group consisting of aluminum orthophosphate and aluminum pyrophosphate, the mol ratio of the phosphate to the salt of the first group being at least one to one.

U. S. 2,418,695—issued April 8, 1947 to Robert Brown.

This patent contains a somewhat novel suggestion to use as a sun ray filter roasted coffee which has been finely ground or pulverized and preferably brought to a colloidal state, that is coffee which has been ground with a suitable greasy substance such as mineral oil, glycerine or lanolin in a colloid mill or the like.

The coffee is roasted at around 375° F. for about 20 minutes, ground, mixed with about 2 parts by weight with the greasy vehicle, and thoroughly ground together in a colloid mill.

Claim 1 is illustrative:

A filter for ultra-violet rays having wave lengths between approximately 289 and 405 millimicrons containing a film comprising a colloidal system containing pulverized roasted coffee and a greasy vehicle.

U. S. 2,425,311—issued August 12, 1947 to G. B. Fauley and A. C. Ivy.

This patent deals with creams which are said to be effective against burning by sparks, hot objects, or sudden heat waves, as well as against frost bite. Further, the cream is said to dry to a water insoluble coating which will withstand the action of rain and sea water which can be removed by vigorous washing with soap and water.

The preparations which are said to have these results include a number of ingredients: (a) A solvent such as isopropanol, (b) A film-forming material such as shellac, (c) A lubricant such as magnesium stearate, (d) A chemical light filter such as menthyl salicylate, (e) A plasticizing ingredient such as linseed oil or triethylene glycol di-2-ethylbutyrate, (f) A wetting agent such as diethylene glycol monoethyl ether, (g) A neutralizing ingredient, and a (h) relatively large proportion of titanium dioxide.

Claim 2 gives an idea of the disclosure and protection:

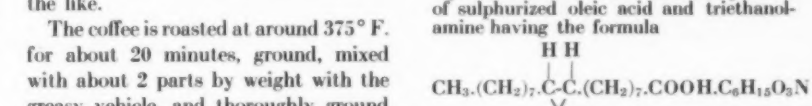
An ointment adapted to protect the skin against burning on exposure to heat waves from an explosion, consisting of 28.5 per cent isopropanol, 13.7 per cent shellac, 3.5 per cent linseed oil, 0.8 per cent triethylene glycol di-2-ethyl butyrate, 8.0 magnesium stearate, 0.2 per cent stearic acid, 1.1 per cent diethylene glycol monoethyl ether, 0.3 long chain alcohol sulfate, 2.5 menthyl salicylate, 37.0 per cent titanium dioxide, 2.2 borax, 2.2 per cent mineral black, said ointment being characterized by the ability to form a tough, pliable film of low thermal conductivity when applied to the skin.

U. S. 2,427,717—issued September 23, 1947 to Frederick E. Dearborn.

Preparations containing uncombined or colloidal sulphur are used in the treatment of certain skin disorders such as acne and seborrhea. Dearborn claims that by combining the sulphur with aliphatic and saturated moncarboxylic acids, their glycerides, and their monohydric esters, improved preparations result as the sulphur is in chemical union with a vegetable or animal oil or fat and consequently is said to be more easily absorbed by the skin, hair or scalp.

The only claim of the patent follows:

A cosmetic preparation comprising an aqueous solution of the addition product of sulphurized oleic acid and triethanolamine having the formula



U. S. 2,435,005—issued January 27, 1948 to Walter F. Huppke et al. and assigned to West Disinfecting Co.

According to this patent a protective cream that dries promptly when applied to provide an elastic covering

(*Continued on page 664*)

PERFUMER'S SHELF

Oxidation Products of Terpinolene

The structure and the chemical behavior of the water-soluble products, obtained from terpinolene by oxidation with molecular oxygen in aqueous dispersion, were investigated. by E. J. Lorand and J. E. Reese (*J. Am. Chem. Soc.* 72:4596, 1950). They found that the three crystalline *p*-menthenetriols (m. p. 136, 124 and 121°c, respectively) are new compounds and that even their hydrogenation products are different from the known menthanetriols. Oxidation experiments (a) on the high-melting (136°) isomer with peracetic acid, followed by periodic acid titration of the resulting trihydric cineole, and (b) on both the menthenetriol and its hydrogenation product with chromic acid yielding "β-thujaketolactone" and "homoterpenyl methylketone," respectively, proved that the substance is a 3-*p*-menthene-1,2,8-triol. The structure of the isomer melting at 124° was determined by two independent methods: (a) periodic acid oxidation followed by acid dehydration to yield acetone and *p*-cresol, and (b) hydrogenation followed by reaction with hydrogen bromide to yield Wallach's 1,4,8-tribromo-*p*-menthane, so that the compound must be a 2-*p*-menthene-1, 4,8-triol. A reaction mechanism based on resonance between two free radicals with alternative conjugated-double-bond systems is offered by these workers to explain the formation of the two triols.

Criteria for Flavoring Essences

In discussing the criteria for selecting essences, E. Bemfield (*Perf. & Essent. Oil Rec.* 41:340, 1950) observes that these flavoring compounds are usually judged on the basis of two factors—smell and color. Obviously these two common tests are not wholly satisfactory and less personal means must be used to judge the comparative values of essences. In the case of the large user, who has laboratory facilities, Bemfield cites certain criteria that should be critically examined. It is well known that an essence is a solution of the actual flavoring material in a solvent. This solvent is usually one or more of the following materials—ethyl alcohol, *iso*-propyl alcohol, glycerine and its esters, the acetins, the glycols and their esters, and in special cases an oil base such as a vegetable oil or fat. A determination of the spirit strength of an essence is important where a buyer buys large quantities of essences and wishes to ensure that the quality of the essences fully conforms to standard. Care should be taken in this determination since an essence usually contains besides the alcohols other substances which are volatile, and a simple distillation such as is carried out with ordinary spirituous liquors has to be modified somewhat.

In the case of vanilla and ginger essence a fixed residue determination carried out by evaporating 10 cc. on the water bath at 100° for one hour is a reliable guide to the product being constant in quality from one batch to the other.

The only other type of determination that needs consideration is the examination of compounds or concentrates for the mineral water industry. These are usually sold with instructions to be diluted with a definite volume of syrup. The manufacturers should take pains to ensure that the preservative content of the compound is correct. Usually enough preservative is incorporated in the compound so that the finished syrup contains 350 parts of SO_2 per million, and no additional preservative is needed.

Although such determination as alcoholic strength, fixed residue value and the like help to ensure that the standard does not vary, Bemfield stresses that the real test of an essence must naturally depend on the taste in the finished product.

Synthesis of Ascaridole

In his report in the Scientific Edition of the *Journal of the American Pharmaceutical Association* (40:69, 1951), A. Halpern points out that while it is rather well known that ascaridole is the only therapeutically active ingredient of chenopodium oil and its structural chemistry has been given rather close attention, few attempts have been made at its synthesis. In his own work, ascaridole was synthesized through the photo-oxidation of α-terpinene. 1,4-Oxido-$\triangle^2$-*p*-menthene, *p*-cymene, and a polymeric fraction were isolated as by-products of the reaction. An unidentified ketone was also shown to be present through its 3,4-dinitrophenylhydrazone. On the basis of the synthetic results and the reported presence of α-terpinene in chenopodium oil, α-terpinene is presumed to be the precursor for ascaridole in its biogenesis in the plant.

Solid Perfume Bases

In discussing bases for solid perfumes, S. P. Jannaway (*Alchimist* 5:42, 1951), points out that mixtures of fats and waxes afford a useful approach to formulation. What is required is a type of pomade that stands up well to climatic variations in temperature and humidity. Another requirement is that the film left behind when the perfumed cake or stick is applied to the skin should not be too heavy or greasy. A modified lipstick or lip-salve base is usually satisfactory. The inclusion of water in such a base, giving a water-in-oil emulsion, is not customary and, if desired, must be carefully tested under controlled laboratory conditions before the product is marketed.

Paraffin wax may be used alone as the vehicle for a perfume in solid pomade or compact form, but it is preferable to use a mixture of various soft and hard waxes, as in lipsticks formulation. Beeswax, for example, gives a good appearance and facilitates easy removal from the mold when the melted mass has solidified. Carnauba wax confers additional hardness; while ozokerite, with its oil-binding properties, improves the dispersion of the perfumery compound in the base. The so-called "amorphous" or microcrystalline types of petroleum-derived wax are very useful also, as they show no tendency to impart a "bloom" or crystallized, frosted effect on the surface of the finished product.

Mineral oil, in small quantities, is often a desirable constituent, because it improves the applicability of the solid perfume to the skin surfaces. If such a wax and mineral oil film is considered too greasy it may be modified by partly replacing the mineral oil with isopropyl myristate or by including a little oleyl alcohol in the formula. Another useful type of liquid constituent is ethyl phthalate or dimethyl phthalate. Still another

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PERFUME and FLAVOR RAW MATERIALS

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COLLECTIVE WISDOM....

NEWSPAPERS featured the story, recently, of one man's miraculous recovery from what would ordinarily have been fatal burns. This result, according to the doctor in charge, was due to "collective wisdom" skilfully applied by research teams who pooled their knowledge of shock treatment, plastic surgery and the physiology of burns. . . . As we study the news behind the news from day to day, we cannot help but observe that this use of collective knowledge is the key to practically every significant achievement, whether in the field of medicine, electronics, nuclear fission . . . or in industry generally. By sharing the benefits of its technical advances for the common good, each segment of science and industry contributes to an expanding horizon of progress from which all may profit. . . . In that category of endeavor devoted to raw material specialization and supply, of which we are a part, we offer the collective wisdom of a large staff and more than eighty years in the field of essential oils and aromatics to any firm concerned with problems relating to the use of perfumes or flavors for the appeal and betterment of their products.

FRITZSCHE BROTHERS, Inc.

Pages from Our Perfumer's Notebook

AMBREINE #20723
For Use In: Oriental and modern type compositions.
Odor Type: Intensely deep, sweet, resinous odor character, modified with a pleasant citrus effect.
Remarks: Use this number in your composition to give it warmth and depth.
ORANGE BLOSSOM #20505
For Use In: Creams.
Odor Type: A very pleasant, refreshing orange blossom composition with a fragrance that is remarkably stable, lasting and gives excellent coverage.
Remarks: This composition is especially recommended for nutrition and hormone creams.
ENFLEUR #09854
For Use In: Creams.
Odor Type: An attractive carnation odor, modified with other floral characters.
Remarks: You'll like this! It imparts an exquisite, light, airy fragrance to the composition; an ideal perfume for creams.

When writing for samples and other details, please address us on your letterhead.

FRITZSCHE Established 1871 **Brothers, Inc.**

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BRANCH OFFICES and °STOCKS: *Atlanta, Georgia, Boston, Massachusetts, °Chicago, Illinois, Cincinnati, Ohio, Cleveland, Ohio, °Los Angeles, California, Philadelphia, Pennsylvania, San Francisco, California, °St. Louis, Missouri, °Toronto, Canada and °Mexico, D. F.* FACTORY: *Clifton, N. J.*

is benzyl alcohol, which apart from its perfumery use is also a valuable dispersing agent. Lanolin is sometimes included to improve adhesion and perfume retention, but is not always a desired constituent of these preparations. Glycerine is also occasionally present.

Essence Concrete of Caferer

Information on the essence concrete of the flowers of Caferer (coffee tree), *coffea arabica*, are given by S. Sabetoy and L. Traband in *Industrie de la Parfumerie* (through *Perf. & Essent. Oil Rec.* 41:349, 1950). The essence was prepared with petroleum ether, with a yield varying between 1.026 to 2.743 per cent. The absolute has been prepared from the concrete with a yield varying between 35 and 42 per cent. The concrete is a brownish black wax and possesses a powerful odor of ylang and of jasmin; it contains sulfur and nitrogen. The constants are:

Index of refraction	**1.5030**
Acid value	**17.8**
Ester value	**120**

Volatile portion was found to be, on average, 35 per cent. It was a golden yellow liquid, with a powerful odor and the following physico-chemical constants:

Index of refraction	**1.4946**
Acid value	**6.6**
Ester value	**120**

It had no nitrogen, but a little sulfur.

Oil of Pycnanthemum Pilosum

The volatile oil of *Pycnanthemum pilosum* Nutt., commonly known as the hairy mountain mint, has been chemically investigated by E. H. Djao and A. E. Schwarting (*J. A. Ph. A.*, Scient. Ed. 40:101, 1951). The plants, established in Nebraska and Iowa in 1947, were harvested in 1948. The plant, at the time of harvest, contained 1.13 per cent of volatile oil. The leaves had a volatile oil content of 2.15 per cent. The volatile oil contains 78 per cent of pulegone and 19.5 per cent of menthone, together with small amounts of limonene and an unidentified alkali-soluble substance. The presence of menthol is doubtful. A modified neutral sulfite method was used in the assay of pulegone.

Preliminary reduction experiments were carried out. Catalytic hydrogenation of regenerated pulegone or the crude oil gave menthone in good yield. Reduction of the crude menthone with sodium and alcohol gave probably a mixture of menthols. The menthol yield was 57 per cent of the whole oil.

Essential Oils and Related Products in U.S.P. and N.F.

In the latest of their annual reviews of analytical procedure for essential oils and related products, E. Guenther and E. E. Langenan (*Anal. Chem.* 23:217, 1951) point out that the fourteenth revision of the Pharmacopoeia of the United States was published during the year and became official on November 1, 1950. Monographs are included for the following products of interest to the essential oil trade:

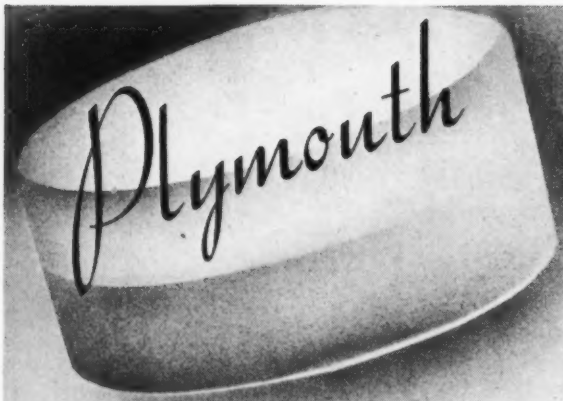
	Page
Essential oils	
Anise oil	**50**
Betula oil	**364**
Birch oil, sweep	**364**
Cassia oil	**142**
Cinnamon oil (cassia oil)	**142**
Clove oil	**144**
Coriander oil	**158**
Fennel oil	**244**
Gaultheria oil	**364**
Lavender oil	**316**
Lemon oil	**316**
Myristica oil	**371**
Nutmeg oil, East Indian	**371**
Nutmeg oil, West Indian	**371**
Orange oil	**405**
Peppermint oil	**442**
Rose oil	**519**
Rosemary oil	**521**
Sassafras oil	**529**
Spearmint oil	**565**
Wintergreen oil	**364**
Synthetics and isolates	
Benzyl benzoate	**80**
Camphor	**109**
Dimethyl phthalate	**193**
Eucalyptol	**241**
Eugenol	**243**
Menthol	**338**
Methyl salicylate	**364**
Propylene glycol	**494**
Saccharin sodium	**523**
Vanillin	**657**
Balsams, etc.	
Benzoin	**78**
Orange flower water	**405**
Peruvian balsam	**447**
Rose water	**519**
Rose water, stronger	**521**
Storax	**571**
Tolu balsam	**629**

They call attention to the fact that oil of eucalyptus, oil of cade (juniper tar), and thymol, which formerly appeared in the thirteenth revision, have been transferred to the latest edition of the National Formulary. A new monograph for dimethyl phthalate has been added. Oil of cedar leaves has been deleted; this oil had been introduced as a wartime substitute for the imported lavender oil in preparing official tincture of green soap.

Guenther and Langeman note that the ninth edition of the National Formulary, which also became official on November 1, 1950, includes monographs for the following items:

	Page
Essential oils	
Almond oil, bitter	**27**
Bay oil	**342**
Bergamot oil	**82**
Birch tar oil, rectified	**83**
Caraway oil	**123**
Cardamom oil	**126**
Chenopodium oil	**136**
Eucalyptus oil	**201**
Juniper oil	**282**
Myrcia oil	**342**
Neroli oil	**364**
Orange oil, bitter	**363**
Orange flower oil	**364**
Pimenta oil	**387**
Pine needle oil, dwarf (oil of *Pinus pumilio*)	**387**
Pine oil	**388**
Santal oil	**443**
Tar oil, rectified	**533**
Thyme oil	**548**
Turpentine oil	**559**
Turpentine oil, rectified	**560**
Wormseed oil, American	**136**
Synthetics and isolates	
Anethole	**51**
Benzaldehyde	**78**
Benzyl alcohol	**80**
Cinnamaldehyde	**152**
Coumarin	**171**
Ethyl acetate	**199**
Isopropyl alcohol	**278**
Methylcellulose	**334**
Oleyl alcohol	**360**
Stearic acid	**502**
Terpin hydrate	**536**
Thymol	**549**
Undecylenic acid	**561**
Balsams, etc.	
Cade oil	**533**
Capsicum oleoresin	**121**
Caramel	**122**
Copaiba	**169**
Cubeb oleoresin	**176**
Ginger oleoresin	**233**
Myrrh	**344**
Orris	**365**
Rosin	**437**
Tar, juniper	**533**
Tar, pine	**534**
Turpentine	**558**

Allyl isothiocyanate (volatile oil of mustard, natural and synthetic) has been deleted from this latest edition.



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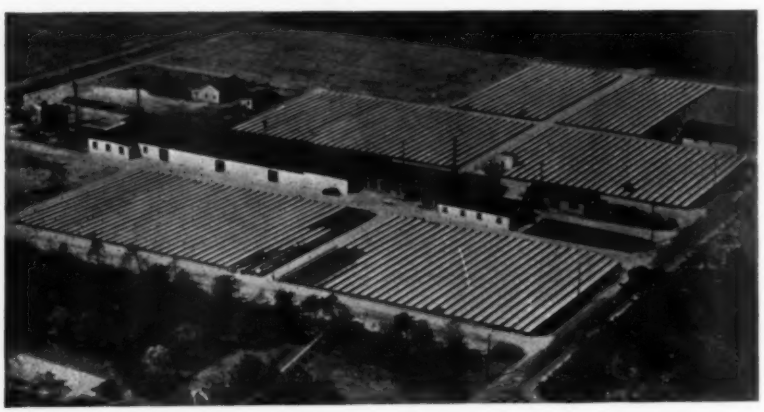

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YOUR TRADE-MARK RECORD

by John H. Graham
International Patent and Trade-Mark Consultant

Protecting Your Bright Ideas

Despite the fact that the Lanham Trade-Mark Act was deliberately developed to modernize trade-mark procedure, there are still some loopholes which are a weak link in our chain of industrial property protection.

These loopholes show up the worst when someone presents a problem which does not automatically fall within one of the established forms of protection we have open to us in this country. We have Patents of Invention, Design Patents, Copyright registration and trade-mark registrations.

Most cases put forward drop into their classes and there is no problem beyond seeking the best protection obtainable. However, there are borderline cases always coming up where the client says: "I've got a great idea—I want to sell it or use it myself. How do I protect it?"

First, we have no actual means of protecting an idea. Often, however, if the idea is examined, some way of protecting it may occur to the mind. To arrive at this solution it is necessary to know the difference between the various forms of protection, so let us look at these.

Patents of Invention. The protection, when granted, is for 17 years. After that anyone can use it. No extension of that term is possible, normally. The method, apparatus or article sought to be covered must be new, useful and inventive. No one has yet defined "inventive" in such manner that one can say this thing is and this thing is not "inventive". Nevertheless, sometimes even a little gimmick put out by you can be patented. This is a sure and safe protection.

Design Patents. The protection, when granted, extends for 3½, 7 or 10 years, depending on what you asked for originally. After the grant, you cannot extend the life of a Design Patent. This form of protection is for the artistic side of this, not for utility. The purpose of the Design Patent Laws is to give protection to those in the decorative arts. The thing to be covered must be new and original. If it has utility, then that must be secondary or inherent.

Copyright. Protection is possible for purely works of art which are original, such as sculpture, plays, books, etc., under the Copyright Law. The term of protection is 28 years and is renewable. The Courts constantly uphold the rights of an author who can show plagiarism by another of his original idea, theme or format.

Trade-Marks. The protection, when registered, is for twenty years, which term is renewable. The notation, design or other feature must be new and must have been used in interstate commerce. Under the Lanham Act, slogans, musical notes, advertising and service marks can be covered. Even color schemes can be protected, when they are considered to be a means for identifying origin of the goods.

These, then, are the four forms of protection open to anyone who can qualify his "thing" for such registration. How can a decision be made as to which form is best when there is no clear cut decision possible?

One of the first things to remember is that both Patents of Invention and Design Patents have limited lives, whereas Copyrights and Trade-Marks can be renewed. This is a very important factor to take into account. Secondly, there is the question of expense. Patents are expensive, with Design Patents running much cheaper than Patents of Invention. Trade-Marks do not cost much. Copyright Registration is extremely reasonable. Thirdly, the question of time is involved in many cases, with Copyrights being very fast and Patents being very slow.

The most important factor, however, is whether the particular idea will qualify for the form of protection. Many cases which seem hopeless at the outset show promise after careful analysis. Perhaps some hypothetical examples will help our understanding of this. The problem presented is a new dispenser for toothpaste in a new form of package. Now, perhaps the way the dispenser works is inventively different from others. If so, then a Patent of Invention can be applied for. The appearance and decorative features may be distinctive also. Then, a Design Patent could be had. A suitable name can be given to it, whereby a trade-mark could be registered. Finally, the package and instructions for use might be Copyrightable matter. In like manner, the case might form the basis for a Design Patent but not likely a Patent of Invention. It also might be registrable as a trade-mark as to its shape or color, or both, and a copyright for it as a creative or decorative work of art might be obtained.

Each form of protection offers advantages and limitations. Each give the owner something to sell. Each give the owner certain specified rights to prevent others from encroaching on his field.

Some problems are not as easy as that given. Take a new game to be played with playing cards and dice, using a new and different board, and let us analyze this.

Patents of Invention can be obtained for toys and games but are the exception. A Design Patent for the layout for the board is possible but only when the

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SINDAR CORPORATION

ANNOUNCES LICENSING POLICY ON GERMICIDAL SOAP PATENT

Sindar patent No. 2,535,077 issued December 26, 1950, covers germicidal soaps containing 2,2′-dihydroxy halogenated diphenyl methanes such as **G-11® (brand of hexachlorophene).**

We are proud to announce that this outstanding result of Sindar research has been awarded patent protection, and we are happy to share the benefit of the patent with the soap industry by granting licenses to soap manufacturers on a reasonable royalty basis, effective January 1, 1951.

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board is distinctive. However, a trade-mark for the game itself and copyrighting of the rules of play are each logical procedures and each has on its side economy and unlimited protection.

Other ideas may not fall so easily into place. A method of making a new drug only lends itself to possible patenting and a trade-mark for the product. A radio program only offers itself for copyrighting and possibly a trade-mark for the name—this latter being a quite recent development in trade-mark practice. A new name for a product only lends itself to trade-mark protection. But a careful investigation of any idea is well worthwhile.

Although there is no protection possible for a bare idea, as such, looking at the idea from all facets may reveal one where some protection is possible under our four forms. None of us like to see our brain children stolen from under our noses, so the next time you have a "tough one" try to see if you can stretch it to fit into the classes given. It's certainly worth the time and effort.

The following Trade-Marks were recently published in the Official Gazette of the United States Patent Office.

Abietsan—52—A—592,967
Abientsan Mfg. Co., Ltd., London, England
Ser. Feb. 24, 1950 D. U. May 3, 1946

Anne French—51—C—592,568
International Chemical Co., Ltd., London, England
Ser. Feb. 15, 1950 D. U. Nov. 21, 1940

Aquamarine—51—C—539,769
Revlon Products Inc., N. Y., N. Y.
Ser. Aug. 17, 1949 D. U. April 1, 1946

Aralinn—51—C—591,839
Coty Inc., N. Y., N. Y.
Ser. Feb. 2, 1950 D. U. Jan., 1950

Baguette—51—B—572,107
Lucien LeLong Inc., Chicago, Ill.
Ser. Jan. 13, 1949 D. U. July 1929

Blair—51—BCDEH—588,650
Morton Mfg. Co., DBA Blair of Virginia, Lynchburg, Va.
Ser. Dec. 1, 1949 D. U. Jan. 1, 1949

Blue Angel—52—A—596,009
Avon Products Inc., N. Y., N. Y.
Ser. Apr. 20, 1950 D. U. Apr. 3, 1950

Bordeau—51—E—539,471
Elizabeth Arden Sales Corp., N. Y., N. Y.
Ser. July 27, 1949 D. U. May 3, 1948

Burnex—51—CI—572,695
S. Silben, DBA Burnex Products Co., Newark, N. J.
Ser. Jan. 29, 1949 D. U. Oct. 3, 1920

Canary Red—51—CE—595,301
Elizabeth Arden Sales Corp., N. Y., N. Y.
Ser. Apr. 6, 1950 D. U. Mar. 3, 1950

Chlorhydrol—51—D—587,150
Reheis Co., Inc., Berkeley Heights, N. J.
Ser. Sept. 27, 1949 D. U. Feb. 17, 1947

Clergine—51—BC—576,521
Clergine Parfumeur, Paris, France
Ser. Apr. 2, 1949 D. U. Oct. 10, 1946

Colibri (hummingbird) — 51 — BC — 566,109
Regane Inc., N. Y., N. Y.
Ser. Sept. 29, 1948 D. U. Nov. 1947

Cool Pink—51—C—566,678
Mme. C. J. Walker Mfg. Co., Inc., Indianapolis, Ind.
Ser. Oct. 7, 1948 D. U. Feb. 23, 1948

Cosmetar—18—C—573,912
Drel Inc., Cleveland, Ohio
Ser. Feb. 15, 1949 D. U. Oct. 22, 1948

Cramer—51—HIKM—589,956 (And Des.)
Cramer Chemical Co., Gardener, Kansas
Ser. Dec. 27, 1949 D. U. Aug. 10, 1943

Dojean—51—B—598,207
Sayman Products Co., St. Louis, Mo.
Ser. May 26, 1950 D. U. May 22, 1950

Dream House—51—B—579,416
Richard Hudnut, N. Y., N. Y.
Ser. May 24, 1949 D. U. May 9, 1949

Duolay—51—I—596,340
F. R. Greenbaum , DBA Sperling Labs., Glenside, Pa.
Ser. Apr. 26, 1950 D. U. Oct. 1, 1947

Endds—51—CD—601,276
Pearson Pharmacal Co., N. Y., N. Y.
Ser. July 26, 1950 D. U. June 23, 1950

Eratol—52—AM—575,597
Pharma-craft Corp., N. Y., N. Y.
Ser. Mar. 17, 1949 D. U. Jan. 20, 1949

Esoterica—51—C—594,769
Golden Peacock Co., Paris, Tenn.
Ser. Mar 28, 1950 D. U. June 24, 1944

E-Van—KO—51—H—594,608
J. G. Evanko, Pittsburgh, Pa.
Ser. Mar. 15, 1950 D. U. Jan. 15, 1930

Evelyn Jones—18—H—569,854
Evelyn Jones, New Orleans, La.
Ser. Dec. 3, 1948 D. U. September, 1947

E-Z-GO—52—A—592,181
Amaza Labs., Macedonia, Ohio
Ser. Feb. 9, 1950 D. U. Oct. 1948

Feathercote—51—E—594,372
Dr. Ellis Sales Co., Inc., Pittsburgh, Pa.
Ser. Mar. 22, 1950 D. U. Jan. 4, 1950

Flobar—52—A—587,470
Flo—Bar Ltd., N. Y., N. Y.
Ser. Nov. 8, 1949 D. U. July 26, 1949

Fragrant Breeze—51—B—567,509
Rigand Inc., N. Y., N. Y.
Ser. Oct. 23, 1948 D. U. Aug. 15, 1948

Gaymour—51—B—582,174
Gaylor W. Keeton Co., Elmira, N. Y.
Ser. July 19, 1949 D. U. Feb. 15, 1949

Globe Trotter—51—C—599,099
Richard Hudnut, N. Y., N. Y.
Ser. June 14, 1950 D. U. May 23, 1950

Griffonnage—51—B—579,687
La Gaine Scandale, Lyon, France
Ser. May 28, 1949 D. U. Jan. 30, 1948

Herpicide—51—H—590,120
Ar. Winazick Inc., N. Y., N. Y.
Ser. Dec. 29, 1949 D. U. June 1, 1899

Hi Nis—52—A—583,344 (And Des.)
Ser. Aug. 11, 1949 D. U. June 10, 1949

Icicle—51—C—597,833
Lentheric Inc., N. Y., N. Y.
Ser. May 20, 1950 D. U. Apr. 24, 1950

Incendiari—51—B—583,552
Sardi Inc., Chicago, Ill
Ser. Aug. 16, 1949 D. U. Feb. 15, 1949

Ion—51—C—580,488
La Maur Products Inc., Minneapolis, Minn.
Ser. June 15, 1949 D. U. May 5, 1948

Lastron—51—E—596,194
Revlon Products Inc., N. Y., N. Y.
Ser. Apr. 22, 1950 D. U. Oct. 30, 1946

Libby—51—B—539,762
Fouchee Perfume Co., St. Petersburg, Fla.
Ser. Apr. 18, 1949 D. U. Mar. 1, 1949

Lien—51—C—589,905 (And Des.)
Lien Chemical Co., Franklin Park, Ill.
Ser. Dec. 24, 1949 D. U. Mar. 15, 1949

Louis Philippe—51—BC—570,455
Whitehall Pharmacal Co., N. Y., N. Y.
Ser. Dec. 13, 1948 D. U. June 18, 1928

Martha Washington—51—ACS—595,840 (And Des.)
Harry Koenig, DBA Anre, N. Y., N. Y.
Ser. Apr. 17, 1950 D. U. September, 1922

Melrose—51—C—593,127
Furlow Dist., Co., Amarillo, Texas
Ser. Nov. 24, 1949 D. U. July 1, 1949

Minit Curl—51—G—539,465
Tintz Co., Chicago, Ill.
Ser. Nov. 26, 1948 D. U. July, 1948

Mon Seigneur—51—B—592,608 (And Des.)
Nicky Chini, Milan, Italy
Ser. Feb. 17, 1950 D. U. Jan. 29, 1949

Necessaire—51—C—597,958
Richard Hudnut, N. Y., N. Y.
Ser. May 23, 1950 D. U. Apr. 28, 1950

Onglistina—51—BCDE—582,795
Manuel Segura Vivdas, Barcelona, Spain
Ser. Aug. 1, 1949 D. U. May 6, 1946

Optimiste—51—BC—588,693
Lehn & Fink Products Corp., Bloomfield, N. J.
Ser. Dec. 2, 1949 D. U. Mar. 17, 1948

Palmer's—52—A—305,091
E. T. Browne Drug Co., N. Y., N. Y.
Ser. Aug. 1, 1933 D. U. since 1886

Party Favor—51—C—579,417
Richard Hudnut, N. Y., N. Y.
Ser. May 24, 1949 D. U. May 9, 1949

Permafix—51—G—590,194
Gillette Safety Razor Co., Boston, Mass.
Ser. Dec. 30, 1949 D. U. June 25, 1949

Polypo—DR. A.J'S—51—K—577,302
Arnold Johannes, Reno, Nev.
Ser. Apr. 2, 1949 D. U. Apr. 2, 1949

Push Button—51—I—586,909
Carter Products Inc., N. Y., N. Y.
Ser. Oct. 27, 1949 D. U. Oct. 14, 1949

Quinlan—52—ABCD—573,972
Kathleen Mary Quinlan Inc., N. Y., N. Y.
Ser. Feb. 16, 1949 D. U. March, 1910

Rainwater—52—H—593,243
Rainwater Inc., N. Y., N. Y.
Ser. Mar. 1, 1950 D. U. Feb. 14, 1950

Red Spark—51—C—598,241
Jacqueline Cochran Inc., Newark, N. J.
Ser. May 27, 1950 D. U. May 2, 1950

Red Trey—51—C—599,639
Lehn & Fink Inc., Bloomfield, N. J.
Ser. June 2, 1950 D. U. May 26, 1950

Refuge—51—H—596,695
Priscilla M. Williams Mfg. Co., Gary, Ind.
Ser. May 1, 1950 D. U. Mar. 1, 1950

Saint and Sinner—51—B—592,283
Perfumerie-Harard Ltd., Inc., N. Y., N. Y.
Ser. Mar. 20, 1950 D. U. Apr. 1, 1944

Scent Sampler—51—3—539,472
L. G. Rothschild, DBA Lenel Co., Dallas, Tex.
Ser. Nov. 2, 1949 D. U. Apr. 28, 1949

Silhouette—52—A—555,475
Armand Co., Des Moines, Iowa
Ser. Apr. 24, 1948 D. U. Mar. 19, 1948

Skin Lure—51—C—575,244
B. Chiego, DBA Bioresearch Labs., Newark, N. J.
Ser. Mar. 11, 1949 D. U. Apr. 19, 1949

Skolex—51—S—587,347
J. B. Williams Co., Glastonburgh, Conn.
Ser. Mar. 3, 1950 D. U. Feb. 6, 1950

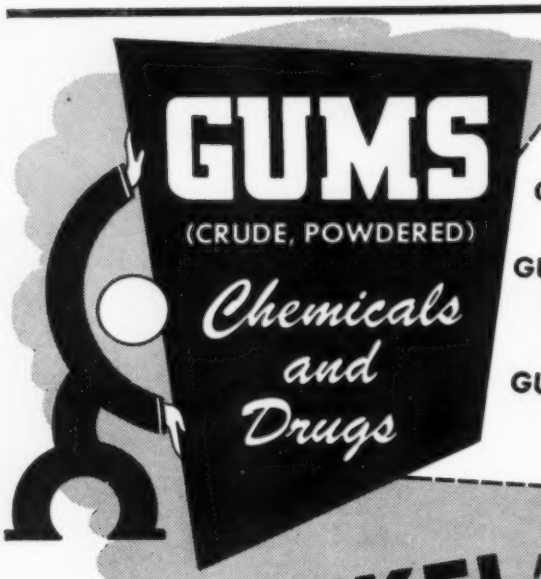
Soft Answer—51—C—585,807
Marie Ogren, San Mateo, Calif.
Ser. Oct. 5, 1949 D. U. Apr. 24, 1949

Special Face—51—C—577,056
Richard Hudnut, N. Y., N. Y.
Ser. Apr. 13, 1949 D. U. Mar. 16, 1949

Spot-Pruf—51—C—582,156
Elizabeth Arden Sales Corp., N. Y., N. Y.
Ser. July 19, 1949 D. U. Oct. 15, 1948

Sprite—51—E—581,222
Lillian Wallace Inc., Chicago, Ill.
Ser. June 28, 1949 D. U. Sept. 7, 1939

String-A-Long Kit—51—C—579,419
Richard Hudnut, N. Y., N. Y.
Ser. May 24, 1949 D. U. May 9, 1949



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INDUSTRY'S BOOKS

American Druggist (1951) Blue Book, 598 pages, 9½ x 11½, Published by American Druggist, New York, $5.

This invaluable price book for the pharmacist is now again available in a new 1951 Edition. The work is divided into the following main sections: Products and Prices Section; Prescription Section; Manufacturers' Catalog Section; Merchandising Section; Animal-Poultry Health Section; Store Equipment Section; Directory of Manufacturers. This new edition lists over 21,000 brand new products and recent price changes.

By-products From Milk, by Earle O. Whittier and Byron H. Webb, Bureau of Dairy Industry, Agricultural Research Administration, United States Department of Agriculture, 317 pp., Reinhold Publishing Corp., New York, $6.

This is the first comprehensive book describing in detail the physical and chemical characteristics of milk, skim milk, whey and buttermilk and their components. It gives methods for converting these products for use as food, in foods and as non-food products. An outstanding bibliography of references to original articles is presented for those who wish to search the experimental background of the facts and procedures. Such theoretical discussions have been included as seem necessary for understanding the principles on which the manufacturing procedures are based. Flow charts are employed to give overall pictures of processes. The chapter on Bakery Products is unique and should be of special interest to bakers and nutritionists as well as to producers of concentrated and dried milk products. Basic information on the chemistry and nutritional value of the components of milk, and on behavior of milk by-products during heating and other processing treatments and the directions for making such products as fermented milks, whey cheeses, condensed and dried whey, bread, ice cream mix, candy, milk sugar and casein, etc. make this book invaluable to manufacturers of dairy products, research workers in food and nutrition, process supervisors and students of dairy science and technology.

Be Your Own Hair Stylist, by Victor Vito, 96 pp., Illus., Homecrafts Publishers, New York, $1.

This book is an endeavor to set forth the principles and practices of good hair fashion, so that they can be followed by women everywhere. Well illustrated, the busiest office worker, student, or mother can here find a hairdo to suit her way of life, her wardrobe, and her daily activities. A special chapter is devoted to home permanents.

Physiological Hygiene, by Cleveland Pendleton Hickman, Ph.D., Head of the Zoology Department, DePauw University, Third Ed., 557 pp., Prentice-Hall, Inc., New York, $5.25.

Progress in health knowledge is rapid these days. One of the major aims of this book is to keep abreast of these advances. The present edition gives considerable attention to recent advances in such live topics as polio, rheumatic fever, parasites, and sex habits. Special attention has been given to the chapter on mental hygiene because of the great emphasis on this subject today. Another feature of this edition is the emphasis on documentary sources.

Annual Report On Essential Oils, Aromatic Chemicals, and Related Materials, (1947-1948), 125 pp., Illus., Schimmel & Co., Inc., New York, $3. in U. S. and Canada, $3.25 elsewhere.

The latest Schimmel Report has just made its appearance covering two years (1947-1948) instead of one in this issue, and offering the usual painstaking record of scientific and commercial developments, research and other information in the field of essential oils and aromatic chemicals during the years in question. As far as a trend can be followed in a work of this sort it is interesting to see that, in spite of the considerable activity in the synthesis of aromatic materials and the wide use of such products, interest in the natural essential oils has by no means abated and some of the most interesting items in the book deal with investigations of new oils. For instance one item deals with a report from an experimental station in Java where leaves of the shrub Clausena anisata were found to give high yields of an essential oil containing 75 per cent to 90 per cent anethol. The oil could be used in place of aniseed oil for many purposes, although the odor is somewhat different. It could probably be produced more cheaply than aniseed oil. Another development in this category concerned experimental work carried out in Texas on the cultivation of goldenrod as an essential oil plant. The results indicated that the oil could be produced easily and economically on a commercial scale. The oil resembles anise oil in flavor and odor as the main constituent is methyl chavicol. A number of other contributions during the years in question relating to the physical and chemical constituents of essential oils are given. Altogether the work is of the same high quality and thoroughness as its predecessors and is worthwhile reading for anyone with a serious interest in this field.

The 1950 Year Book of Drug Therapy (October, 1949 to September, 1950) edited by Harry Beckman, M.D., Director, Department of Pharmacology, Marquette University School of Medicine, 566 pp., The Year Book Publishers, Inc., Chicago, $5.

This book again brings to the reader a timely, invaluable coverage of the year's international journal literature dealing with latest drugs and pharmaceuticals—their pharmacology, action, dosage, indications, contraindications, toxic effects, etc. Here is vital, up-to-date information on applied therapeutics. Divided into sections, the book covers every phase of general and special practice—allergy, cardiovascular diseases, dermatology, endocrinology, gastroenterology, hematology, internal medicine, neuropsychiatry, obstetrics and gynecology, ophthalmology, otorhinolaryngology, pediatrics, roentgenology, surgical specialties and venereal diseases. You can quickly learn through this book which of the new drugs have proved successful, which have not, thus enabling you to evaluate more efficiently the new preparations being offered for your use with almost daily frequency.

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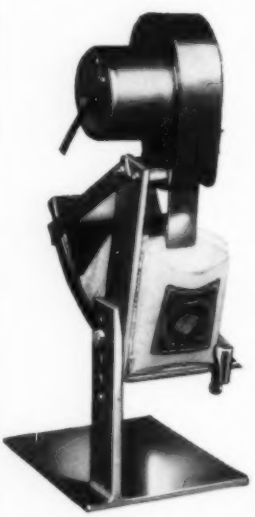

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The Chemistry of Hydrazine, by L. F. Audrieth, Professor of Chemistry, University of Illinois, and Betty Ackerson Ogg, Research Associate, University of Illinois, 244 pp., John Wiley & Sons, Inc., New York, $5.

This book is a comprehensive treatment of one of the simple hydronitrogens—hydrazine—and its inorganic derivatives. Emphasizing nitrogen chemistry as a distinct borderline field involving a knowledge of both organic and inorganic chemistry, the book begins with a discussion of the relationship of hydrazine to some of the other hydronitrogens and its consideration as an ammono derivative. The methods of formation and preparation of hydrazine are given, followed by a summarization of the known methods and procedures for the preparation of concentrated and anhydrous hydrazine. The physical and thermochemical properties, explosive characteristics, and gaseous decomposition are described in some detail. Then, the general chemical properties and physiological effects of aqueous solutions of hydrazine are presented. Oxidation is discussed in a separate chapter. Since the catalytic decomposition of hydrazine involves a self-oxidation-reduction reaction, information on this important aspect is included. A reference list of all known reactions involving the use of hydrazine as a reducing agent is also given to suggest possible uses of hydrazine as an agent for achieving a wide variety of chemical reduction reactions. Both qualitative identification and quantitative determination are treated thoroughly and two chapters are devoted to the properties of the simple and the double salts of hydrazine and its coordination compounds. Anhydrous hydrazine is treated as a parent substance of a system of acids, bases, and salts. Throughout the book the authors stress the fact that hydrazine is the parent of this large class of compounds whose derivatives eventually will find application in many industrial fields. The final chapter surveys both the actual and potential uses of hydrazine.

Perfumery Synthetics and Isolates, by Paul Z. Bedoukian, Ph.D., Compagnie Parento, Inc., 488 pp., D. Van Nostrand Co., Inc., New York, $7.00.

So complete is the coverage in these pages that it gives all the information needed by the busy chemist on every one of the substances used in synthetic perfumery. It includes their chemical structure, uses, occurrence, methods of preparation, physical and constants, chemical properties, processes of manufacture, evaluation and analysis, commercial data, and prevailing prices. Many hundreds of references organize the literature of chemistry so that you can locate at once the source of information on any topic. A concluding analytical section gives the chemical methods of analysis, physical methods for determination of properties and a series of vapor pressure graphs which are most useful in planning separations by distillation or other vapor-phase methods. This book fully meets every need of the chemist working with these substances used in the synthetic perfumery industry.

Heterocyclic Compounds, Volume 2, Polycyclic Five- and Six-Membered Compounds Containing One O or S Atom, Edited by Robert C. Elderfield, Columbia University, 571 pp., John Wiley & Sons, Inc., New York, $15.

This is the second volume in the series—Heterocyclic Compounds—a collection of information vital to every chemist. Volume II covers polycyclic compounds containing one oxygen or sulphur atom. (Volume I deals with monocyclic compounds containing one O, N, and S Atom.) As in the first volume of the series, emphasis here is on the chemical principles of the substances treated rather than on presenting an exhaustive compilation of physical constants. Approached from the standpoint of modern organic chemistry, full use is made of the newer concepts as bases for explanation and correlation of observed facts. On the other hand, the author and the contributors avoided theoretical speculation unsubstantiated by experimental fact.

Chemical Facts and Figures, Third Ed., 419 pages, Compiled by the Manufacturing Chemists' Association, Inc., Washington 5, D.C., $3.

This compilation contains useful information and statistics relating to the Chemical and Allied Products Industries. Statistics on United States production, sales, imports, exports, and prices of chemicals, chemical products, and chemical raw materials for the period 1946 through 1949 are contained in this new third edition. The volume also contains partial data on the first six months of 1950. Like its predecessors, this edition is a part of the Association's plan to publish a continuing record of chemical industry statistics. Previous editions covered the periods 1929-1939 and 1940-1945. In addition to U. S. data, the book contains available Canadian statistics, including a newly-added section on minerals. Financial records are included for 100 leading chemical process companies on an annual basis for the ten years 1939-49. A special section on employment and wages includes data on average earnings, length of work week, number of wage earners, labor turnover, and work stoppages. The present volume includes about 500 new chemicals on which statistical data have become available since the last edition.

Progress In Chromatography 1938-1947, by Professor L. Zechmeister, California Institute of Technology, Pasadena, 368 pp., John Wiley & Sons, Inc., New York, $8.

In this work the author demonstrates the high efficiency of chromatographic adsorption analysis which still gives information when other analytical means fail. Employing a "progress report" method, Professor Zeichmeister reviews the adsorption processes especially applicable to chromatography which have been developed since 1938. Progress in Chromatography surveys this rapidly changing field, giving time-saving hints on methods, adsorbents and solvents which will be invaluable to the experimenter. In addition to a critical analysis of the various data presented, the author supplements his findings with an extensive bibliography for those interested in more intensive research. This work begins with a general discussion of the principles and practice of chromatography. This is followed by a treatment of the separation of steroisomers, the interaction between adsorbent and adsorbed substances, and exchange adsorption. The author then proceeds to a discussion of adsorbents and their standardization, solvents, apparatus, partition chromatography, and the chromatographic boundary method (Tiselius-Cleasson method). The second section of the book specializes in the differences in properties of the various organic substances important in chromatography, covering each one in some detail. Some organic substances subjected to specialized treatment include chlorophyll, porphyrins, Bile pigments, carotenoids, lipoids, carbohydrates, amino acids, synthetic dyestuffs, sterols, heterocyclic compounds, vitamins and enzymes. Important applications of these biological substances are given and in the closing chapter inorganic chromatography is surveyed, with emphasis on the separation of cations.

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ABREAST OF THE MARKETS

SHORTAGES DEVELOPING IN ESSENTIAL OILS, BOTANICALS AS CONTROLS TAKE EFFECT; MENTHOL DECLINES FURTHER

The supply problem dealing with imported botanicals and essential oils became more critical last month as stocks in this country diminished and replacements climbed more out of reach because of rising prices. This development was accentuated by the fact that most of the essential-oil and botanical houses declined to offer any price information. On the one hand, if a source quoted a lower price in certain items, it was felt that it might cause a rush of buying in that category, and might also create a false impression among consumers on the nature of the market, since decreasing prices in normal times mean ample supplies and an invitation to increased buying. On the other hand, if these same sources quoted higher prices on those items in which they had established high ceilings, the figures would probably represent only a few sales.

Rather than add confusion to the already disrupted market, dealers chose to keep their prices to themselves in most cases. The general impression, however, last month was that such oils as Italian lemon and bergamot, citronella (Ceylon), lemongrass, and clove are the hardest hit so far by the price restrictions; inventories in these items are at a very low level.

Each of the five price index graphs emphasizes the general inactivity of the respective markets. The graph representing fifty commodities inched up nine tenths of a point from 160.2 to 161.1 while the medicinal chemicals graph fell off by two tenths of a point from 135.6 to 135.4, menthol being the only item which changed in price. The botanical index, on the other hand, went up a half a point as a result of a 50c advance in balsam tolu, and the essential oils index, usually a very active graph, also advanced a half a point. The only oils which changed were those of lavender and lime which advanced, and eucalyptus which declined. The most radical change occurred in the case of the cosmetic raw materials which went up appreciably by 9.8 points, from 159.2 to 169.0. The chief cause for this abrupt rise was the sudden price advance of the Brazilian balsams, for example, balsam copaiba para which more than doubled in value from 85c to $2.

On the brighter side of the picture is the slight indication that essential oil prices may be starting a general decline. A few oils, notably, dill, eucalyptus, and patchouli which fell off in price by 15c, 5c, and $1 respectively, were reduced last month because foreign shippers were apparently beginning to suffer owing to the lack of interest among American buyers. In the past, European markets have been buying very heavily from these sources with little regard to cost and have been paying more than those ceiling prices prevailing in the United States. The time has now come, according to some reports, when Europe can neither afford to buy more of these stocks nor can absorb them. Shippers at the origin are in turn becoming more cooperative with American buyers now that they are losing other buyers, and if current price movements in these few items prove significant, there may be further declines in the months to come.

Another factor which may tend to have a softening effect on prices is the maturing of new essential oil crops which will increase the supply at the origin.

Spokesmen in the trade are still expressing the belief that the Office of Price Stabilization should relax controls on the ceiling prices of imported essential oils and botanicals. In this way they would be able to maintain a reasonable profit on the sale of each imported item, and yet the spot prices would be confined to a limited degree of profit.

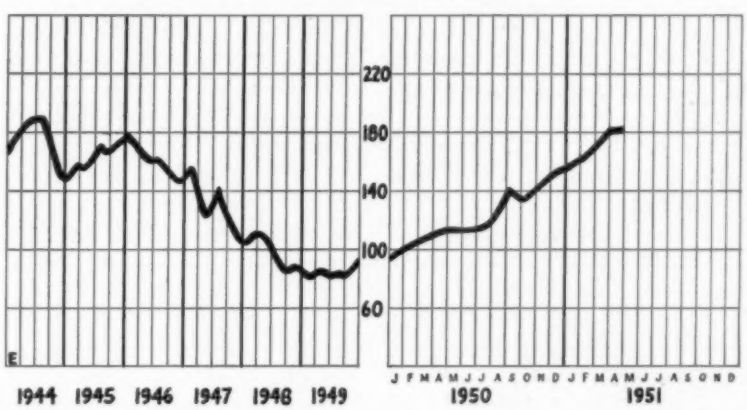
As for the chemical market, alcohol, quicksilver, and glycerine are all characterized by tight supplies and a constant demand, although the latter has fallen off a trifle in the past several months. The concensus is that consumers have begun to realize that the present world crisis will last for some time, and with it, the economic controls. The consumers have therefore become resigned to the fact that they can buy only on allotment.

Menthol Continues Downward

The price of menthol declined further last month as an indication that inventories in this country were quite large and the consuming season ended. The range extended between $11.25 and

(*Continued on page 662*)

15 Essential Oils—Weighted Price Index. 1926 = 100.



The essential oils index advanced from 183.7 to 184.2. Eucalyptus went down; lavender and lime oils went up.

Prices quoted in this section were current on the first of this month.

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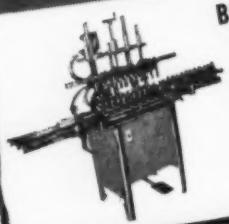

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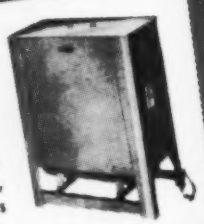

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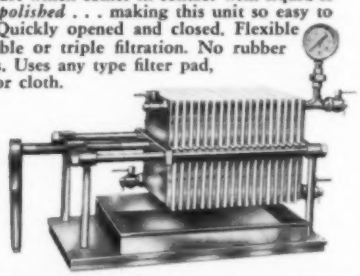

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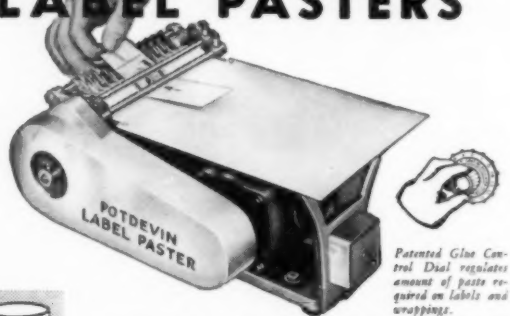

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ALCOHOL AND GLYCERIN IN TIGHT SUPPLY; MOST WAXES DISTURBED BY PRICE CEILINGS; BALSAMS UP SHARPLY

There has not been much change in the alcohol situation in the past month the item having remained in a very tight supply position for several months. No relief seems to be in sight. Cuban sources have been selling molasses directly to cattle dealers in this country at about 32c f.o.b. Cuba, instead of converting it to alcohol and selling the end product. Alcohol dealers are not able to compete with such high prices in the molasses field as those which are acceptable to the cattle feed industry.

A recent development in the price-ceiling structure in this country was the freeing of fermentation ethyl alcohol from price control in late April. Other products derived from the fermentation alcohol were also exempted, such as butyl alochol which is derived synthetically from ethyl, as well as fermentation acetone and fermentation butyl alcohol. This exemption was probably dictated by the high cost of agricultural products used in the fermentation process, as compared with the more stable prices of those raw materials used in the production of synthetic alcohol. It remains to be seen what effect this action will have on the alcohol picture.

Some sources report that they are selling about 10 per cent more alcohol to consumers this year than during the same period in 1950.

The alcohol tax unit of the Bureau of Internal Revenue, Treasury Department, last month released the following data on the supply, production, withdrawals, and stocks of ethyl, completely denatured and specially denatured alcohol during the month of February, 1951, compared with February, 1950.

Production

	Proof gallons	
	1951	1950
Ethyl	34,721,108	24,254,211
*Completely denatured	83,364	42,513
*Specially denatured	16,204,336	13,230,926

Withdrawals

	Wine gallons	
	1951	1950
†Ethyl, tax paid	3,880,580	2,546,770
tax free	26,142,953	24,299,975
*Completely denatured	81,980	67,931
*Specially denatured	16,258,437	13,137,450

Stocks

	Gallons	
	1951	1950
†Ethyl	59,641,280	28,384,148
*Completely denatured	45,623	14,064
*Specially denatured	1,487,404	3,115,053

*Wine gallons. †Proof gallons.

Waxes are Unsettled

In view of the price ceilings in this country and the high replacement costs of the waxes consumers last month were hesitating to enlarge their inventories. In many instances, it was impossible to import the waxes because the foreign sources were selling them at prices in excess of the American ceilings. Carnauba, for example, fell off to $1.28 for No. 1 and to $1.18 for the North Country No. 3. There was very little business activity. Ouricury wax, refined, fell off to 95c a pound, one source attributing this decline to the fact that sugar cane wax, which is a domestic item of limited production, is replacing it. The latter item is cheaper and can be used for the same purposes.

Carnauba wax exports reached a record level of more than 12,000 metric tons in 1950, according to preliminary estimates, with about 80 percent going to the United States. The 1950-51 crop is expected to total about 11,000 tons. The first cuttings were made in August 1950. One of the main reasons for last year's record export figures in this wax was the inclusion of this item in barter trade between Brazil and the United States during February and March 1950. The effect of this arrangement was to increase the cruzeiro price in Brazil but decrease the price in New York.

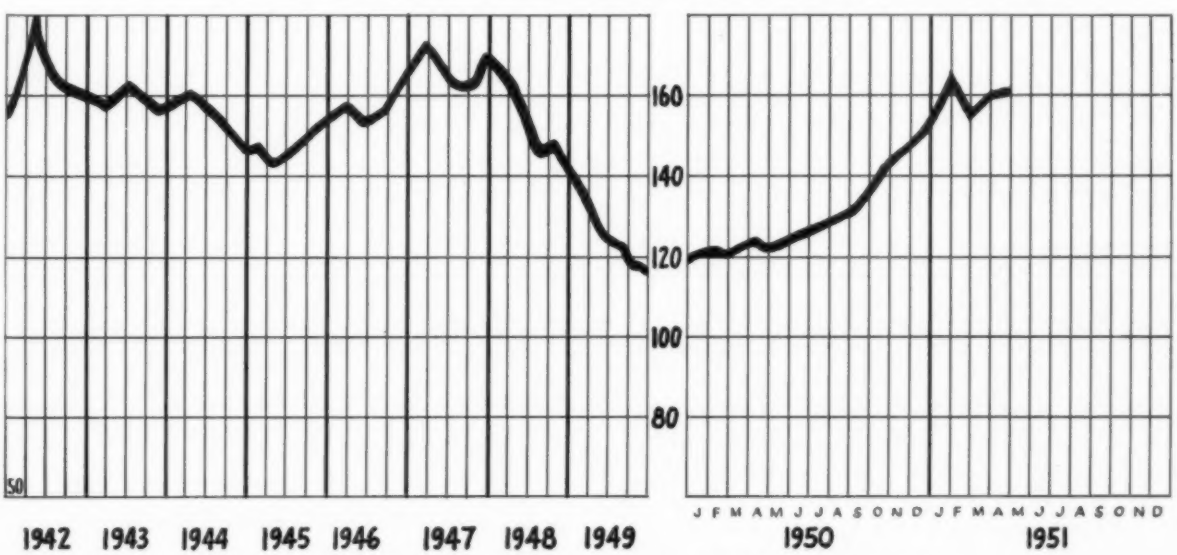
Glycerine Demand Eases Up

While glycerine still remains in tight supply, demand for the commodity has apparently subsided slightly, compared with the frantic situation of three or four months ago. Suppliers reported they were selling to regular customers on an allocation basis and that these customers apparently accepted their limited purchases without fuss, thus accounting for the apparent softening of the demand. Actually there were just as many consumers attempting to purchase glycerine last month as there were during the latter part of 1950, only they had now begun to realize the futility of trying to enlarge their allocations.

South America Items Scarce

A considerable volume of bois de rose is said to be afloat, on its way from

50 Raw Materials—Weighted Price Index. 1926 = 100.



The price index of fifty commodities for April advanced slightly from 160.2 to 161.1.

APRIL PRICE CHANGES

UP

Anise Seed Star 10c
Arabic Gum, White No. 1 2c
Balsam Copaiba Para $1.15
Balsam Copaiba S. Amer., USP 75c
Balsam Peru 45c
Balsam Tolu 50c
Benzoin Gum, Siam 25c
Benzoin Gum, Sumatra 6c
Cajuput Oil 25c
Karaya Gum 22c
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DOWN

Beeswax, white 1c
Birch Oil, Southern 35c
Carnauba Wax No. 1 2c
North Country No. 3 3c
Cumin Seed, Morocco 9c
Dill Oil 15c
Eucalyptus Oil 5c
Japan Wax 1c
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Montan Wax ½c
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Patchouli Oil $1
Spermaceti 1c

Brazil to this country, the spot situation of this oil still remained tight during April, with quotations ranging between $5.25 and $5.75. The balsams, however do not appear to be in such a favorable condition. Severe shortages have occurred in each one, both because of a dwindling supply of collectors in Brazil and also because that government is reported to have diverted much of its balsam stock to foreign countries where no ceiling prices are prevailing. Balsam copaiba para almost tripled in price last month, having jumped from the range of 85c to $1 to that of $2 to $2.25. Balsam copaiba South America U. S. P. was up 75c to $2.50; balsam Peru advanced 45c to the $2.70 level; and balsam tolu went up 50c to $6.75.

As reported some months ago, botanical pickers in the Brazilian area have migrated to other industries, such as the rubber plantations, where the work is more remunerative.

Menthol Continues Downward

(*Continued from page 659*)

$11.50 at the end of April and was lower than the replacement cost of the material in Brazil. Consumers were watching closely, however, to see if the price were on the way up again. In spite of their heavy stocks on hand, it is very possible that the large consumers may enter the market heavily at this time to take advantage of the current prices before they go any higher, if the trend proves to be in this direction. No menthol was coming into this country at all from China because of the embargo imposed last December on trade with that country. It also seems unlikely that the United States is receiving any Chinese menthol indirectly, as through England, since the menthol shipments (or any other commodities which may have originated in a Communist nation) must be proven to have belonged to a non-Communist nation prior to December 17. When this has been established, and the dealer's import license approved, the transaction may be completed.

Brazilian menthol was still too high-priced to attract dealers in this country, while it is not expected that any Japanese menthol will be available until later in the year. The production capacity of menthol crystals in Japan, as of January 1950 was said to be 185,000 pounds a year, according to *Foreign Commerce Weekly*. A major obstacle to expansion of output was insufficient acreage for cultivation of the plant, much of the land being reserved for the planting of staple foods. Additional factors were the lack of improvement in plant strains and insufficient funds and equipment.

Japanese annual domestic requirements of menthol crystals are about 80,000 pounds, according to the report, and of peppermint oil, 66,000 pounds. The postwar production of menthol in Japan during the years from 1945 to 1950 are shown in the accompanying table.

Year	Planted area	Dried grass	Crude oil	Menthol crystals	Peppermint oil
	Acres	*Pounds*	*Pounds*	*Pounds*	*Pounds*
1945	7,800	13,100,000	131,000	52,500	78,500
1946	4,450	9,220,000	92,000	37,000	55,300
1947	3,300	7,100,000	71,000	28,400	42,500
1948	2,200	4,200,000	42,000	16,800	25,100
1949	2,200	3,800,000	38,000	15,200	22,800
1950[1]	5,650	16,200,000	161,000	64,500	96,000

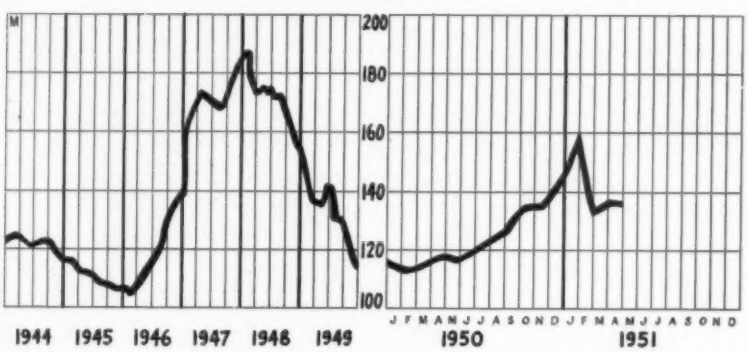
[1]These official estimates may be optimistic. Actual production statistics will be published when available.

The persistent decline in menthol prices which has been taking place in the last few months was caused by the feverish buying on the part of dealers in this country of Chinese material from last September through the middle of January. As a result, consumers are still well stocked up, especially now since the consuming season has ended.

No Change in Quicksilver

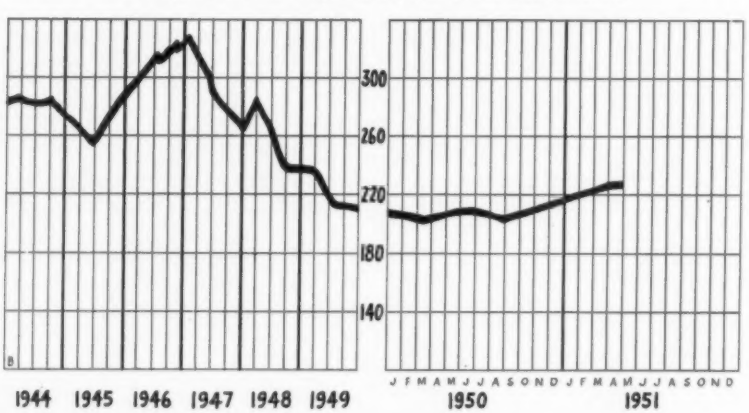
The price range of quicksilver continued to extend from $215 to $225 a

15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.



The medicinal chemicals index declined from 135.6 to 135.4. Menthol was lower.

15 Botanicals—Weighted Price Index. 1926 = 100.



The botanicals index went ahead from 227.3 to 227.8. Balsam tolu was higher.

flask last month, with no chance of importing any of the metal from Italy, this country having dropped out of the market. The mines in the United States were still mostly idle, although they may begin to open in the future in view of the high price of the metal. Reports were circulated last month in the trade to the effect that there is a large quantity of metal afloat from Spain.

Japan Peppermint-Oil Industry

Japan is rebuilding its peppermint oil industry, with reports that shipments from that country during the selling year 1950 to 1951 are anticipated to total 100,000 pounds. Postwar shipments have shown a steady gain; in 1947 to 1948 they were 69,720 pounds, and in 1948 to 1949, 87,980 pounds. Before the second world war Japan provided about 80 percent of the world's supply of peppermint oil of the *Mentha arvensis* type. During the war, however, Japanese peppermint acreage dropped to 10 percent of the prewar level, and since the war, it has increased to 2,700 chobus (6,615 acres) and production of crude peppermint oil to more than 130,000 kin (1 kin = 1.32275 pounds).

Chinese Oils Limited

Both anise oil and cassia oil are still available on spot in small quantities, according so sources who reported they could satisfy inquiries on the respective oils in the ranges between $2.25 and $2.60 for the former and $5.25 and $5.75 for the latter. Arrival of oils from China, however, are negligible because of the government-imposed embargo on imports from that country.

Geranium Oil Prices Stabilized

Geranium oil stayed in the range between $26 and $36 last month, and probably will remain there for quite some time, according to members in the trade, who report that stocks on the Reunion Islands are now at a low level. It is believed that no appreciable stocks will be available from that area until the latter part of the year when the next crop will be ready.

Eucalyptus Oil Production Up

Of those essential oil houses reporting last month, some quoted eucalyptus oil at at $1.40, while others ranged up as high as $1.65. Now that the producing season in Australia is drawing to a close, dealers in this country expect a ready source of replacements from this quarter. Brazil has issued figures on eucalyptus oil production in that country during the past few years, indicating that it is increasing yearly. In 1947, for example, 231 pounds of oil were produced, while in 1948 the production figure was 1,059 pounds, and in 1949, it was 7,258 pounds. No later figures are available up to this time.

No Ergot Available

Ergot was not to be had last month in spot markets, and none was expected much before July or August when the new crop is available. A possible new source of the material was suggested in the latter part of April when the University of Florida announced that a certain type of mushroom in their possession was believed to possess the same properties as ergot. This particular mushroom, which is native to Florida, was fed to a pregnant rat during the course of experiments and had the same effect on the rat as ergot has when it is given to women during childbirth. Although the mushroom is very rare, it was reported the scientists had developed a method of growing it in the laboratory.

Anise Seed Higher

Most sources quoted the anise seed star from 38c to 40c, although there were a few spot prices at 36c for this Chinese item.

Citronella Oil Off Slightly

Some sources were quoting citronella oil, Java type at $2.65 last month, and others, as high as $3.25. The Ceylon variety ranged from $2.40 to $3.00, according to seller. There have been reports that foreign sources of the oil are more eager to ship to the United States now than they were previously, and that they may be more cooperative when it comes to reducing their prices to fit the price ceiling in this country. Production of the oil is improving in Citronella, according to these reports, but the effect probably will not be felt in this country for some time.

Bergamot Oil Out of Reach

Many essential oil houses will not report bergamot oil prices, not only because the replacement cost is far above the ceiling prices, but also because spot supplies were dwindling. Shippers were so far ignoring the American market as long as they were able to sell the oil to other countries. Some houses were quoting the oil at $8 a pound, while others were reportedly selling it for as high as $10 or $11.

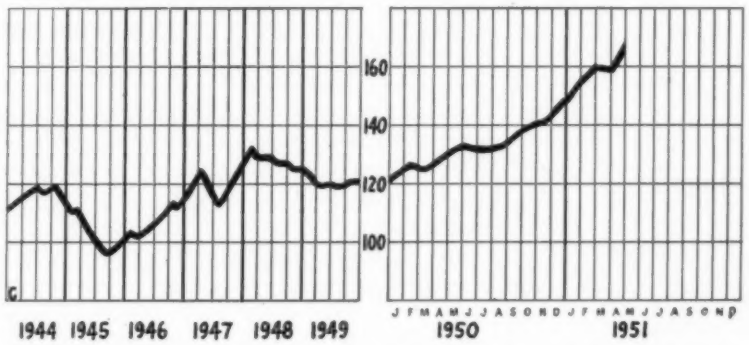
Cumin Seed Continues to Fall

Cumin seed fell off 9c in April to the current level of 32c to 35c. The drop was attributed to the fact that there was very little demand for the article from this country.

Citrus Oils Very Firm

Both California lemon oil and orange oil continue in very short supply as a result of the excessive demand on producers. The cost of Italian lemon oil is so prohibitive that it is impossible now to import because of the ceiling prices in this country. The production of orange oil still remains very low in Florida, and as a result, California producers are being besieged with orders. Orange oil, American cold pressed ranged last month from $2.15 to $2.75, according to seller, while the West Indian oil was quoted from $2.85 to $3.25, and the Italian oil, from $3.25 to $5. California lemon oil ranged between $4.75 and $5.50, while the Italian brand was selling for $5.50 on the lower end of the range and $8 at the upper limit.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



The cosmetic raw materials index jumped up from 159. to 169.0. Arabic gum, Balsam copaiba, balsam Peru, balsam tolu, and tragacanth gum were higher; beeswax, Japan wax, menthol, and spermaceti wax were lower.

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Twelve Years of the New Drug Section

(*Continued from page 642*)

formation necessary to support a new drug application. Nothing is said in the regulation about charging for experimental material. Such a practice is not illegal. But it has been evident that some organizations were using the 505(i) regulations in an attempt at commercial exploitation of a product without complying with the New Drug Section requirements. This is not in the public interest. It is unfair to those who abide by the spirit of the law, and we believe it may be illegal. It is hoped that recommendations can be made to the Administrator at an early date which may help clarify the regulations and discourage this abuse.

A recent problem for which a completely satisfactory solution has not yet been worked out, has to do with the distribution of potent substances with a recognized hazard of some magnitude. We believe the physician must be adequately informed *before* he undertakes the initial use. How can it be made certain that this occurs? We do not believe it is desirable to risk commercial distribution and use prior to the education, so to speak, of the physician. Certainly, if his stimulus comes from reading the statement "Literature available on request" on the bottle, we will have the cart before the horse. The recent experiences with Cortisone and ACTH, in which initial distribution was restricted, also the educational approaches to the physician by means of film and seminar types of programs, can be considered as experimental approaches to a solution of the problem. We in the Food and Drug Administration think that developments ahead may force further consideration of the matter. More and more the therapeutic agents offered by the industry to the medical profession are powerful agents, potent in a pharmaco-dynamic sense, capable of producing ill as well as good effect. More and more the medical profession needs to be made aware of the powerful potentialities of its therapeutic agents. More and more it is going to be the manufacturer's responsibility to give factual, digested and assimilated information to the medical profession. It has been said, sometimes somewhat factitiously, that the pharmaceutical industry is a powerful agent in post-graduate medical education. Personally I think there is much of truth in the statement. But I predict that if the present pace continues, manufacturers are going to find it necessary to go beyond the presentation of well-written brochures, presented by personable detail men. I predict that their medical directors are going to find themselves and their staffs more and more directly involved in teaching and demonstration programs.

Patent Thoughts and Trends

(*Continued from page 647*)

film that adheres tenaciously to and flexes with the skin, which is effective to perform its protective function for many hours but yet does not inhibit transpiration, and which film may be readily washed off with a warm

soap solution is obtained by using as a carrier or vehicle adsorbent material such as finely divided clay, kieselguhr, diatomaceous earth, aluminum hydrate or silica gel. Active ingredients such as insect repellents, light screening compound, or a combination of both, are intimately mixed with the adsorbent.

Claim 1 is illustrative:

A protective cream consisting of an alcogel of an inorganic gelatinous hydrous oxide having adsorbed thereon an organic skin protective compound substantially insoluble in water but soluble in alcohol, and including also a film-forming composition and a volatile solvent for the latter, said composition being of character to form a flexible porous film upon evaporation of the solvent.

RECENT PATENTS

2,535,077—**Sindar Corp.—Germicidal Soaps Containing Halogenated Dihydroxy Diphenyl Methanes.**

2,535,223—**M. O. Montgomery—Hair Curling Unit.**

2,535,385—**White Labs.—Diriboflavin Ester of Pyrophosphoric Acid.**

2,535,635—**Am. Cyanamid—Substituted Pyrimidines.**

2,535,747—**Commercial Solvents—Substituted Hexahydro-Pyrimidines.**

2,535,934—**Am. Cyanamid—Sulfanilyl Piperazines.**

2,535,959—**R. A. Satrian—Hair-waving Device.**

2,536,168—**Clark & Clark Co.—Amphetamine Chewing Gum.**

2,536,315—**Cutter Labs.—Penicillin-ephedrine Vasconstrictor.**

2,536,360—**Dupont—Racemization of Lysine.**

2,536,668—**Heckman Co.—Electric Permanent Waving Device.**

2,536,750—**Pittsburgh Coke & Chemical Co.—Germicidal organic mercurials.**

2,536,751—**Pittsburgh Coke & Chemical Co.—Herbicides.**

2,536,983—**Gen. Aniline—Biocidal Composition.**

2,537,609—**F. T. Tyson—Indole Process. O-toluidine is reacted with sodium hydride to form sodium o-toluide. Carbon monoxide is then added and the reaction conducted under pressure at 150° to 400°C. The sodium salt of indole is decomposed with water and the indole steam distilled.**

2,537,757—**S. Hermann—Insulin Purification.**

2,537,868—**Hoffmann-LaRoche—Water-Soluble Salts of Diethylstibestrol Di-Sulfoacetate.**

2,537,870-1—**Merck—2 Halo- and Amino-Quinoxalines.**

2,537,933,4—**E. R. Squibb—Antibiotic Salts of Mono (Higher Aliphatic) Sulfates.**

2,537,941—**Chas. Pfizer—Streptomycin Recovery.**

2,538,018—**Nordisk Insulin—Crystalline Product of Insulin and Alkaline Protein.**

2,538,034—**B. T. Bush, Inc.—Fatty Alcohols Process.**

2,538,081—**Merck—Penicillin-Diisopropylether Complex.**

2,538,092—**Merck—Water-soluble Sulfaquinoxaline Tablets.**

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2,538,099—Merck—Streptomycin Elution Process.
2,538,104—Merck—Glutamyl-Glutamyl—Glutamic Esters.
2,538,106—Merck—N-Methyl-d-Glucosamines.
2,538,107—Sterling—4-Aryl-4-Aminomethylpiperidines.
2,538,126—Merck—Penicillinate Esters.
2,538,127—G. D. Searle—Medicated Suppositories.
2,538,139—Merck—Biotins.
2,538,140—Merck—Adsorption and Elution of Streptomycin Employing Columnar Carbon.
2,538,322—Wyeth—Substituted Barbituric Acids.
2,538,557,8—Ciba—Sulfanamidopyrimidine-Formaldehyde Condensation Products.
2,538,645—W. F. Hamilton—Vasoconstrictor Compounds of Saccharin.
2,538,721—Upjohn—Penicillin Production.
2,538,735—Commercial Solvents—Ammonium Penicillin.
2,538,763-6—Parke, Davis—Phenylpropanediols.
2,538,792—Parke, Davis—Phenylserinol Preparation.
2,538,793-5—G. A. Breon & Co.—Esters of Cyclo-Alkyl Acetic Acids.
2,538,847—Chas. Pfizer—Streptomycin Recovery.
2,538,942-3—Merck—Streptomycin Process.
2,538,960—E. R. Squibb—6-Cyclopropyl-2-Thiouracil.
2,538,963—E. R. Squibb—Cupric-d-Penicilloate-G-Process.
2,539,483—S. L. Ruskin—Urea Ascorbate.
2,539,848—Heyden—Procaine Urea.
2,539,854—Merck—Alkaloid Salts of N-Formyl-S-Benzyl d-Penicillamine.
2,540,047—Shell Dev. Co.—Crsytalline Complexes of Sterols with Oximes.
2,540,116, 2,540,118—Hoffmann-LaRoche—Manufacture of Vitamin A Intermediates.
2,540,155—Burton T. Bush, Inc.—Preparation of 1-Dibenzylamino-2-Haloethanes.
2,540,218—Squibb—2-Hydroxy-Pyridine-N-Oxide.
2,540,236—Merck—Crystalline Sulfaquinoxaline and Acetone.
2,540,238—Merck—Purification and Recovery of Streptomycin.
2,540,243—Merck—Preparation of Isomers of Methyl Penta acetyldihydro-streptobiosaminide.
2,540,274—Merck—Amino Acid Amides of Pteroic Acid.
2,540,284—Merck—Chromatographic Purification of Streptomycin and Streptothricin HCl.
2,540,302—Merck—Vitamin-Enriched Farinaceous material.
2,540,356—Sharp & Dohme—Sulfonamides.
2,540,680—Hoffmann-LaRoche—Beta-Pyridyl Carbinol Acid Tartrate.
2,540,786—Abbott Labs—Vasoconstrictor Amine Salts of N′-Acyl Sulfanilamides.
2,540,946—Merck—Pyridoxal-Histamine.
2,540,964—Merck—11-Ketopregnenes.

2,541,074—**Research Corp.**—**3(alpha)-Hydroxy-cholanic acid derivatives.**

2,541,091—**Ortho Pharmaceutical**—**Ether of 1-halogen-2-methyl-4-hydroxybutene-2.**

2,541,103—**Ortho Pharmaceutical**—**Spermicides. Contain unsaturated higher fatty acids and alkylphenoxy-ethanols.**

Copies of U. S. patents may be obtained for 25c each by writing to the Commissioner of Patents, Washington 25, D. C.

Shampoo Tints

(*Continued from page 591*)

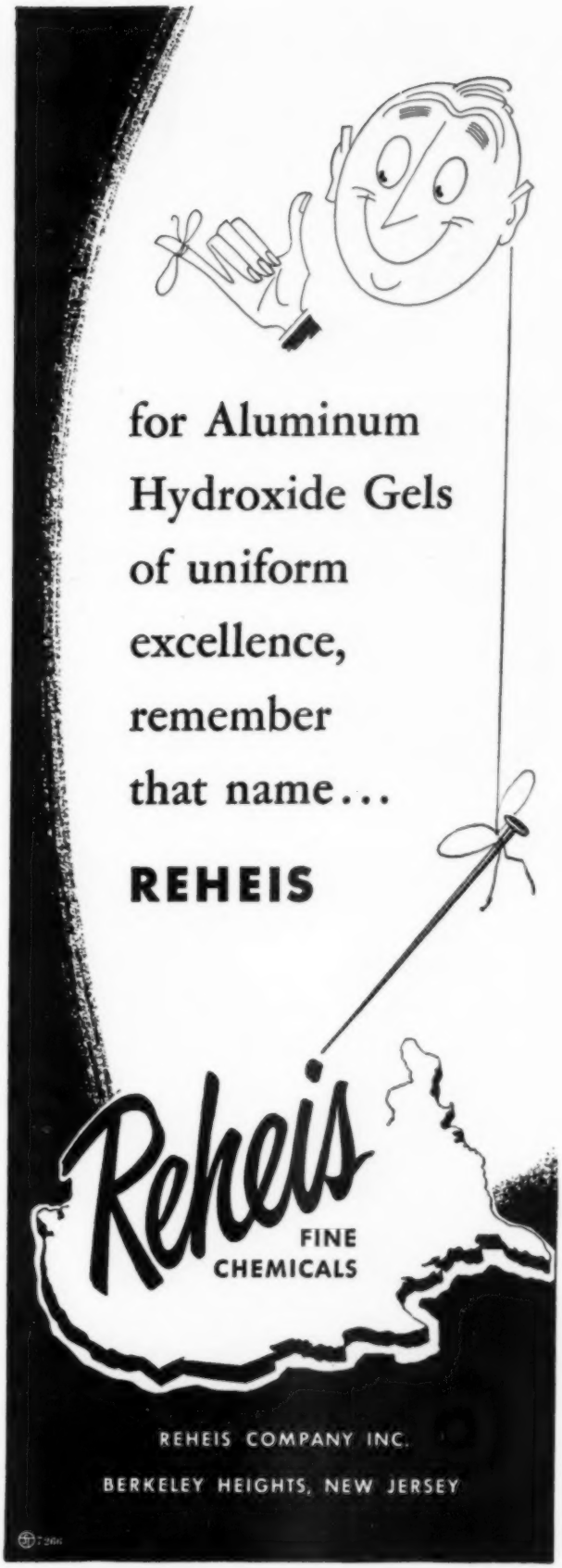
naries, however, in that the hair is certainly more manageable after their use and because a quaternary has greater effect as a bactericidal agency—a function which would be a desirable adjunct to good cleansing. Perhaps the best vehicle would be a compromise to the cost factor in which a mixture of the quaternary and non-ionic detergents are used. By this means, it would be possible to employ the optimum conditions for tinting and still have a creditable shampooing agency, with a lessening of foam as a possible defect which would be more than compensated for by good tinting and good manageability of the hair.

Cosmetic Development

(*Continued from page 587*)

their appearance and odor. It is true that this change and improvement of appearance of the various parts of the surface of the body to which these preparations are applied can be of such a nature that it will improve the strength, tone, texture and other characteristics of the skin, hair, lips, etc., and that this might be accomplished through the use of ingredients which feed, or stimulate these parts of the body. However, the term "skin food" is not recognized by the enforcement agencies and cannot be used in labeling or advertising.

The line between the therapeutic and cosmetic action of ingredients is a rather hazy one despite the opinions and rulings of the enforcement agencies. And improvements in cosmetics will sooner or later make this line still more hazy as scientific research into cosmetology brings into use raw materials which affect more basically and more noticeably the parts of the body to which cosmetics are applied. It is definitely along this line of endeavor that the greatest future of cosmetics appears to lie. Sooner or later some one is going to break through the restrictions surrounding advances of this sort and then the rush will be on. The scientific studies might reveal to researchers ways of cosmetic treatment with materials which have thus far gone unnoticed. Perhaps such developments will have to remain undiscovered until some raw materials not now in existence have been brought into being. However, it seems that the array of raw materials now available in this industry, or the possibility of production of wanted raw materials by the chemical industry generally, is large enough so that with very little effort, suitable products could be found.



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Drug Information Services

(*Continued from page 589*)

raphical indexes and abstract journals in the case of the really basic search. The "Current List of Medical Literature," issued by the Army Medical Library, supplies information that is relatively recent and covers many foreign publications; or the search may be continued in "Quarterly Cumulative Index Medicus" or in "Chemical Abstracts." The survey need not necessarily be completed by looking through these, but may be extended to other journals. In two very excellent articles, Harold J. Oatfield[4,5] covers the literature of the chemical periphery. There he records serial reviews, some of which are as follows:

Annual Review of Biochemistry
Annual Review of Physiology
Advances in Protein Chemistry
Advances in Biological and Medical Physics
Advances in Enzymology
Nutrition Reviews
Omnia Medica
Recent Progress in Hormone Research

In addition to these, I should like to mention the publication of FIAT Reviews[6] which covers the German scientific literature from 1939 to 1946, and which is issued in 84 volumes. A limited number of copies are in the United States. Some of these are at the Library of Congress and others are at the Office of Technical Services, U. S. Department of Commerce.

Oatfield also lists bibliographical indexes, abstract journals and their dates of issuance. The following are a few indexes and abstract journals which may be searched for information:

Abstracts of World Medicine
Agricultural Index
Bibliographic Index
Biological Abstracts
British Abstracts
Chemisches Zentralblatt
Engineering Abstracts
Excerpta Medica
Experiment Station Record
Index to Periodical Dental Litreature
Industrial Arts Index
International Index
Nuclear Science Abstracts
Nutrition Abstracts
Physiological Abstracts
Readers' Guide to Periodical Literature
Veterinary Bulletin
Zoological Record

"Bibliography of Technical Reports" (before July 1949 named "Bibliography of Scientific and Industrial Reports,") available from the Office of Technical Services, U. S. Department of Commerce, is a guide to the Government's collection of wartme and postwar technical reports. "The Numerical Index" to this is now available, covering volumes 1-10, 1946 to 1948. The "Bibliography" covers the research and development in fields of chemicals and allied products, drugs

and pharmaceuticals, dyes, ceramics, food, fuels, metallurgy, nuclear physics, structural engineering, etc.

The "Bibliography" is only one of a vast number of publications issued by various governmental agencies. Issued monthly by the Superintendent of Documents is an indexed catalog of "United States Government Publications." If one of us were asked to locate figures on penicillin production, consultation of "Chemicals and Drugs," issued monthly by the Department of Commerce, would furnish the answer. The November 1949 issue, for instance, contains a chart of penicillin domestic production by months for the years 1943 to 1949. Data on production and sales of drugs and pharmaceuticals, and toilet preparations is to be found in this industry report. In addition to publications, the Government agencies have many libraries which are extremely helpful in securing information. Many are listed in "Library and Reference Facilities in the Area of the District of Columbia" issued by The Library of Congress, 1948.

Numerous private agencies have specialized libraries which when consulted offer valuable services to the public. Very helpful in locating these libraries is the book edited by Rose L. Vormelker entitled "Special Library Resources," which lists the location, type, and scope.

In concluding, I cannot stress too much the importance of attending scientific meetings. Not only is current technical information obtained but the librarian keeps informed of where specialized studies are being conducted so that if additional data is desired, the investigators may be contacted, I have touched on many sources of information available, but in the final analysis, the type of study conducted will depend not only on the acuity of the person posing the question but also on the understanding of it by the librarian. By attending company meetings and getting to know the actual problems, the librarian is in a better position to organize and administer authoritatively the reference services.

1. Doe, Janet, editor: A Handbook of Medical Library Practice, Chicago, Ill., American Library Association, 1943, pp. 371-544.
2. Brodman, Estelle: Bibliographical Lists for Medical Libraries, ed. 2, New York, Columbia University School of Library Service, 1949.
3. Kronick, David A.: A selected list of house-organs for bio-medical libraries. Bull. M. Library A. 38: 152-55, April 1950.
4. Oatfield, Harold: Literature of the chemical periphery. I. Cancer. Bull. M. Library A. 38: 9-21, Jan. 1950.
5. Oatfield, Harold: Literature of the chemical periphery. II. Bacteriology. Bull. M. Library A. 38: 156-65, April 1950.
6. Miller, M. W.: FIAT Reviews. Paper presented at the Div. of Chemical Literature of the American Chemical Society, Detroit, Mich., April 20, 1950.

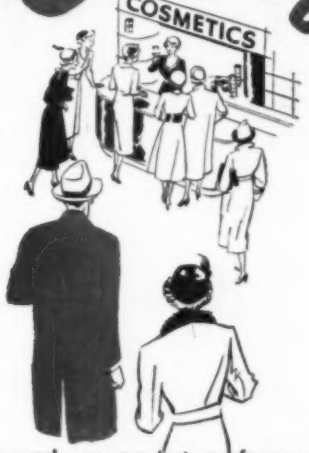
Eliminating Product Substitution

(*Continued from page 585*)

bad name to their profession. Obviously, action against substitution may offend the substitutor himself, but after all, who cares, he's a louse anyhow and can't be doing you any good if he's substituting on your products. Once we even worried about offending him, so after suing a number of druggists for substitution, we shopped them over-the-counter for some of our products. In every case they were dispensed without comment and observation showed that our products had not been put "under the counter."

WHAT MAKES A PRODUCT

Go Over?



BASICALLY it depends on product performance! How well it satisfies. How much it induces people to want more and buy again. But finding the formula which wins popular acceptance (and builds repeat business) is no simple task . . . Only thoroughgoing research, teamed up with specialized compounding skill can achieve that goal — ECONOMICALLY.

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KOMMON SCENTS!

For months, this column has carefully avoided politics, training its jaundiced eye on sports, television and the like. So, in the day's idiom, "wha' hoppen?" Along comes the Kefauver Committee to tie up sports politics —then puts the whole shebang on television!

•

Until recently, it was just a joke that TV had invaded everything but the family bathroom. But after seeing some of the fancy-shaped designs for new television screens, one can no longer be sure of even that.

•

'Til the advent of the Kefauver Kwiz Kids, a politician was considered a man who knew all the answers. Today, that's the qualification for a good witness.

•

The example of their elders is having less than a wholesome effect on the younger generation. Once a fifth grade nephew, asked by his teacher, "Who shot Abraham Lincoln," either knew the answer or didn't. Today, he saves face by refusing to testify "on the grounds it may serve to incriminate me."

•

Naturally, nobody expects anything to come out of the investigation—except the principals involved, the Treasury Department, Immigration Service and some 300 political district leaders. Even "prosecutor" Rudy Halley wound up in the hospital.

•

The inquiry has proven conclusively that crime doesn't pay, especially when the criminal doesn't pay off. The gamblers said they gave it to the police but they were topped by one fireman, who swore he gave it to the mayor.

•

The Cosmetic Industry is disturbed by the revelations. As one soft-spoken manufacturer said, After viewing the official on the stand:

"I would never have believed that crook was a grafter!"

George Fiedler

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Up 'til now, I've been rambling along in a general way and haven't said anything about how to stop this contemptuous practice. As I said in the beginning, I can't outline any absolute method for suppressing substitution. All I can do is tell you how we proceed.

It is our contention that the most effective way to stop substitution is at its source—with the manufacturer of the imitation product. After all, the retailer can't cheat if he's got nothing to cheat with! However, legal action against the imitation manufacturer involves a suit for unfair competition which must have as its base evidence that he is going out of his way to make a product that can be passed off for yours. In other more legalistic language, he is providing the substitutor with the instrument of fraud. Now he can't be successfully accused of this, no matter how much his product looks like yours if your product is not distinctive. Your product must have shape or color, or both, that is not inherent in the product. Its distinctive features must be non-functional.

To provide ourselves with this basis we took the drastic step of changing our "Benzedrine" and "Dexedrine" Tablets from fairly normal looking objects to a rounded triangular shape with distinctive colors. Both shape and color are non functional and are present solely for the purpose of identifying products of our manufacture. It is fairly obvious that anyone who would produce an amphetamine or dextro amphetamine tablet that looked like these products would be going to all that trouble for just one reason and that's to provide a substitute for our products.

I'll admit that such a drastic change in the appearance of two large products was the cause of many lumps in many throats, and I for one didn't rest easy until we had gotten back all the old type tablets and the new type polychromic jobs had been in the doctors' hands for sometime. Although we had a few complaints, actually the letters of praise from doctors as well as druggists far outweighed them.

It wasn't too long after this change that rounded triangular tablets of amphetamine and dextro amphetamine colored pink and orange appeared on the market and were promptly seized upon by the substituting druggist as just the ticket for filling "Benzedrine" and "Dexedrine" prescriptions. Just as promptly we set to work tracking down the identity of the manufacturer and picking up prescriptions that had been filled with the imitations. All our activity was carried on with as much secrecy as was possible as we wanted to hit hard and unexpectedly. Finally, our big day arrived and we marched into court with a complaint containing over 70 affidavits and 100 exhibits. These affidavits from competing manufacturers, wholesalers, retailers, detectives, shoppers, doctors and even the doctors' patients told the story of our tablet change, how our tablets were recognized, that the imitators' tablets had actually been substituted and generally that the imitators were very unfairly competing with us. Although the sheer weight of these papers was impressive in itself we made every effort to insure this

same characteristic in their contents. The affiants were persons who were well known in their respective fields and whose stature was such that their word would be given great weight. The retailers were men who occupied positions of trust in the pharmaceutical field such as officerships in associations and memberships on boards of pharmacy. The wholesalers represented names that are well known in their communities, and the physicians all held prominent positions on recognized medical faculties. The affidavits certifying the purchases of the imitating goods were all well documented and in every case were substantiated by the affidavit of a witness who accompanied the shopper.

Our complaint asked the court to grant us a preliminary injunction prohibiting the manufacture and distribution of the imitations and pending the hearing on such injunction for a temporary order restraining the defendants from further business in these products. This is a most unusual request and courts are not prone to grant it as it is based entirely on our evidence and has not a single word in defense of the imitator. However, our evidence was so overwhelming that the order was granted at once and subsequently the preliminary injunction was handed down after the defendants had a chance to say their piece. In view of the court's order they were not very convincing.

We hardly had time to catch our breath before up popped another imitation and after that some more. As these cases have been in different cities we have changed the persons whose affidavits we have used so that we will have local authority to back up our claims. After all, the judge is a human being and is more likely to take the word of his townsman than that of some outsider. Within the past year we have gotten six such restraining orders and preliminary injunctions and presently have one more on the fire. With becoming modesty, I say that this success has not made us lax. We intend to chase all these imitators to earth until the shade boys realize that it profiteth them not to mess with "Benzedrine" or "Dexedrine." Although these activities have cost quite a bit in both money and time, they have proven worth while. In all these cases we have gotten a very good idea of the activity of the imitators and had they been allowed to continue our losses would have been many times more than we have spent.

You may say that's fine, if your product is distinctive enough to support unfair competition litigation against a manufacturer of imitations, but what about me, my product is not that distinctive— it's only got one feature that could even be remotely considered as distinctive, so how could I get at this thing at its source. Don't give up, all is not lost! You always have grounds for an unfair competition suit against the retailer who substitutes on prescription, provided you can prove that the prescription called specifically for your product and that it was filled with another product.

Well, you say, that's an expensive performance, I can't sue all the substitutors in the country. Unfortunately, the substitutors realize that so they are not

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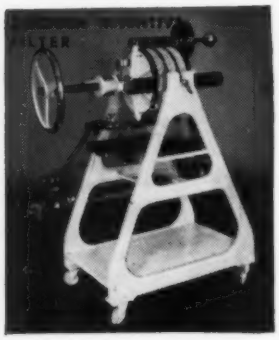

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too upset if one manufacture embarks on a program of suing substituting retailers. But they'd think twice if a number of manufacturers started to crack down. Such activity by a large group (even if prosecuted individually) would cause enough furor to discourage a lot of substitutors. Such large scale activity would encourage pharmacy boards and other regulatory bodies to proceed against substitution. Up 'til now they have done nothing, in most cases, because very few manufacturers have even admitted the existence of substitution, much less shown any interest in it. Such interest on the part of a number of manufacturers, if brought to the attention of the Boards, will undoubtedly result in their taking a definite and active stand against substitution.

I do not here propose the formation of any anti-substitution body, but I do ask that you give the matter your considered thought for I am certain that if every legitimate manufacturer would endeavor to eliminate substitution on his product in his own way the crooks who have preyed on our industry for so long would have to turn to other fields to make a living.

The simple mathematics:

12 per cent of all stores substitute

20 per cent of stores do 50 per cent of Rx business

80 per cent of stores do other 50 per cent of Rx business

If all substitutors are in the 80 per cent of stores that means that $\frac{12}{80}$ = 15 per cent of the 80 per cent are substitutors

As these 80 per cent do ½ of total volume the 15 per cent substitutors do 7½ per cent of the total business (15 per cent x 50 = 7½ per cent)

APMA Meeting

(Continued from page 595)

The other fellowship would aid a law student wishing to specialize in food, drug, and cosmetic law. Creation of these two fellowships was approved by the Association, and they are to be in the sum of $2,500 each.

The 1951 A. P. M. A. Research Award was conferred upon Dr. Howard A. Rusk, professor and chairman of the Department of Physical Medicine and Rehabilitation of New York University, and also an associate editor of the New York Times, for "his illustrious contributions to medical progress in rehabilitation." In making the presentation of the Award, Dr. Martin Lasersohn, vice-president of Winthrop-Stearns, and chairman of the A. P. M. A. research board, said:

"Dr. Rusk's research has directly affected the lives of many thousands of service men and civilians. His own clinical management of patients has rehabilitated to active useful life innumerable individuals who have sustained catastrophic accidental injury or who have become crippled from such paralyzing conditions as poliomyelitis, multiple sclerosis, cerebral palsy, paraplegia, and viral spinal cord infections."

In accepting the award Dr. Rusk said that in the

phases of preventive medicine and definitive medicine and surgery the United States has made the greatest advances of all time. Because of this success, there have arisen new problems of chronic disability in an aging population. The next step must be the full development of the third phase of medicine which takes the patient from the bed to the job.

"Its challenge is as significant as those presented by the first two phases of medicine," said Dr. Rusk," and its solution at this time is even more pressing. The attack must be frontal and, as in all frontal attacks in medicine, research is the primary force. But the problem we are attacking now requires a different laboratory from the average concept of a medical research program. This is not a problem for the test tube or the burette; the laboratory must be the community and the tools those of the ancillary community services. Some are sharp, many are crude. New Tools will have to be forged and new technics of utilization and integration established. The approach to this problem that is facing us today is social-medical-vocational. We must paint with a broad brush on a canvas with a deep prospective, with the patient, the physician, and the community as three facets in a total entity."

Dr. Erwin E. Nelson, medical director of the New Drug Section of the Food and Drug Administration, spoke on Twelve Years of Administration of the New Drug Section. He reported on a condition which FDA officials feel constitutes an abuse of the regulations regarding distribution of drugs for investigational purposes. Said Dr. Nelson:

"As you know, these regulations permit sending of research materials to investigators if all of the relatively simple requirements set down in the regulations are met. The purpose of the exemption of this research material from the requirements of section 505 of the act is clear. It is to permit the development of the information necessary to determine whether a product rates further study and, if so, the collection of the information necessary to support a new drug application. Nothing is said in the regulation about charging for experimental material."

Dr. Nelson said it is evident that some manufacturers are using the 505 (1) regulation in an attempt at commercial exploitation of a product without complying with the new drug section requirements, which is not in the public interest.

John J. Hammer Jr., vice-president of Smith, Kline & French Laboratories, spoke on the elimination of product substitution. In the first place the tablets or capsules must be a distinctive size, shape, and/or color, so that it can be shown that another product is made clearly in imitation of the original so as to promote substitution by the pharmacist when filling prescriptions. He said that it is an expensive performance to bring these manufacturers into court, and the manufacturers realize this. Therefore, they are not too too upset if only one manufacturer embarks upon a program of fighting this practice. He added:

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"However, they would think twice if a number of manufacturers started to crack down. Such activity by a large group, even if prosecuted individually, would cause enough furor to discourage a lot of substitutors. Such large-scale activity would encourage pharmacy boards and other regulatory bodies to proceed against substitution. Up to now, they have done nothing, in most cases, because very few manufacturers have even admitted the existence of substitution, much less shown any interest in it. Such interest on the part of a number of manufacturers, if brought to the attention of the boards, will undoubtedly result in their taking a definite and active stand against substitution."

Speakers from government agencies were Cyrus S. Ching, chairman of the Wage Stabilization Board who spoke on "Some Observations on Present Day Labor Relations:" Narcotic Commissioner H. J. Anslinger, who spoke on "Narcotics in the War Emergency;" Senator H. H. Humphrey, "The Economic Stabilization Program;" and Col. Laurence A. Potter, of the Surgeon General's office, "Medical Support to the Korean Operations."

Howard B. Fonda was reelected president of the Association; J. Paul Folsom, Lederle Laboratories, was elected Eastern Vice-president; J. Kenneth Flint, Flint, Eaton & Co., Central Vice-president; G. Preston Snow, Hyland Laboratories, Western Vice-president; Fred W. Misch, the Smith-Dorsey Co., treasurer. Elected to the Board of Directors were: Francis C. Brown, president of Schering Corporation; Robert A. Hardt, Hoffmann-La Roche; E. C. Robins, A. H. Robins Co.; William B. Graham, Baxter Laboratories; and E. L. Patch, the E. L. Patch Company.

In the golf tournament, Stanley J. McGiveran, of Kimble Glass Division of Owens-Illinois Glass Co., won the cup for low net, and Patrick Henning, R. P. Scherer Corp., low gross. Garth H. Quinn, Burroughs Wellcome & Co., won qualifying low gross, and Harry C. Phibbs, Harry C. Phibbs Advertising Co., won the consolation prize with a score of 132.

Modern Trends In Laxatives

(*Continued from page 593*)

action and thus facilitate the passage of feces. Mineral oil is the most important member of this class. The irritant cathartics group, which includes the emodia and resinous compounds, the irritant oils (e.g. castor oil), phenolphthalein and mercurous chloride, are much less used as such but do find employment in conjunction with other laxatives, especially those of the colloid type.

For quite some time it has been recognized that the hydrophylic vegetable gums, including acacia, karaya, tragacanth, bassora, agar, Irish moss, psyllium seed, and others, have certain advantages over other types of laxatives. As summarized in the *J. A. M. A.*,[18] they lubricate and protect the intestinal mucosa, favor a stool of soft consistency by their water-binding power and increase its bulk, which by distending the intestinal wall stimulates peristalsis. The frequency and ease of bowel movement are thereby increased. Significant in-

crease in the bulk of feces results when these agents are given orally in dry form; the effect being especially pronounced in the case of Irish moss, psyllium seed and agar.

In their comprehensive review of such colloid laxatives, published just a decade ago, Gray and Tainter[19] pointed out that those products which are processed into granular form, or which are coated so as to delay swelling until swallowed, are more pleasant to take, because they do not form gummy, hard-to-remove mucilages on the teeth. They stressed that all these products should be administered with liberal quantities of water, so as to keep the intestinal contents as fluid as possible.

Despite their superiority in several respects these hydrophylic vegetable laxatives do show certain faults. Some contain irritating substances which induce excessive peristalsis.[20] Conversely, normal stimulation of the intestine may be lessened by their demulcent action. They give a sense of fullness in the stomach, flatulence, and at times, if large quantities of fluids have not been taken, they may cause obstruction.[14] In discussing the use of bulk laxatives, Meiselas[3] warns of the danger of fecal impactions. In addition, it has been found that a specific allergic sensitivity to the various agents may be produced. From a pharmaceutical standpoint, there is often a lack of uniformity; different batches showing variations in gel strength, cleanliness and other characteristics.[21]

Considering these shortcomings, it was natural that a search should be undertaken for a bulk-producing substance which could be taken by mouth and which would have little or no effect on the stomach and small intestine.[12] After viewing the facts, Marks[22] stated that the ideal laxative should be chemically inert, and its action should be a physical one directed toward increasing the bulk in the large bowel. It should possess enough water-retaining properties to form a normal, soft stool.

Going into more detail, Blythe and his associates[21] feel that, to avoid gastric discomfort, the agent should swell in the alkaline intestinal tract but not in the acid gastric juice. Pointing out that the physical characteristics of the gel determine its ability to mix with the intestinal contents, they suggest that a high degree of miscibility may be the primary factor in avoiding the formation of gummy impactions in the gut. In order to keep the intestinal contents soft throughout the tract, the gel must be able to retain its water against the pull of osmotic and other water absorbing forces within the intestinal wall.

There is growing evidence that the cellulose derivatives, carboxymethylcellulose and methylcellulose, meet most, if not all, of these criteria. Such synthetic agents have been found to be superior to the natural drugs in several respects. It has been shown that they are nontoxic when given orally, are not absorbed by the intestinal mucosa, are not degraded by intestinal enzymes, and are nonantigenic. In addition to these superiorities over the natural gums, they have a high degree of chemical uniformity.[5,18]

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rious comparative tests. In one such investigation, Blythe and his associates[21] made a comparison between commercial preparations of karaya and psyllium and the synthetic agents, methylcellulose and sodium carboxymethylcellulose, commonly referred to as CMC. They found that the physiochemical properties of the cellulose derivatives give them two major advantages over the natural gums; namely—greater hydrophylic capacity and the formation of viscous homogeneous solutions. The former characteristic makes for a more efficient bulk laxative, while the latter permits uniform distribution through the intestinal contents and should eliminate any tendency to produce intestinal blockage.

However, one significant difference between the two synthetics was observed. It was found that methylcellulose goes into solution slowly, but carboxymethylcellulose remains essentially insoluble when agitated in a simulated gastric juice. On the basis of such findings, these workers concluded that, for use as a bulk laxative, carboxymethylcellulose is the most promising substance of all those tested.

Sodium carboxymethylcellulose or CMC, with a number of valuable applications in the general pharmaceutical field, has found an important place in the production of laxatives.[23] In extensive studies,[24] CMC showed no evidence of being toxic to white rats, guinea pigs, dogs, or human beings. For example, daily feedings of 1 Gm. of CMC per kilogram of body weight to white rats for a period of 25 months produced no deviation from a control group with respect to fertility, blood counts, urinalysis, weight change, and gross and microscopic appearance of the heart, liver, stomach, intestines, kidneys, spleen and adrenals. Approximately 90 per cent of the CMC fed to the animals was reclaimed in the feces. Furthermore, in patch tests on 200 human subjects, it was demonstrated that the material is neither a primary skin irritant or a sensitizing substance.

Several clinical studies have provided evidence of the safety and efficiency of carboxymethylcellulose. This is well indicated in the data obtained by Schultz[25] from a study of over 250 patients, picked at random from a general practice. All were markedly benefited by the use of small amounts of CMC. Five to ten 0.75 Gm. tablets daily for the first few weeks, then one or two tablets daily thereafter, proved to be an effective dosage schedule.

In the opinion of this clinician, the physiological action of CMC to produce a safe and natural bowel movement is due to two characteristics of the compound. First is the formation of an undigestible, hydrophylic gel which prevents the excessive absorption of water from the bowel, with resultant hard feces. Second is the lubricating quality of this gel which aids in the passage of the feces. These factors, he believes, account for the high laxative effects of small amounts of sodium carboxymethylcellulose. With daily soft stools, the psychic trauma produced by unfounded fear of constipation is eradicated. In the case of irritable or spastic bowels, the amount of CMC is decreased when the irritations and spasms have subsided. He advises that patients with

atonic constipation should be slowly weaned from their former laxative when started on CMC. This material is contraindicated in suspected obstruction or any constricting lesions of the bowel.

In citing the value of CMC in patients suffering from hemorrhoids and proctitis, Schultz notes that it has several advantages over mineral oil. With the cellulose derivatives, fat-soluble irritants are not left clinging to the inflamed mucosa, there is no fear of leakage, and there is no absorption of fat-soluble vitamins from the intestinal tract.

Also indicative are the observations made by Fittipoldi and Davis,[5] who tested the clinical effectiveness of sodium carboxymethylcellulose as a laxative in 128 patients. Results with this agent were as good or better than those with formerly used laxatives in 109 of these cases. Most of this group, who were accustomed to irritant or saline drugs, effected a satisfactory change to CMC within one to three days on a dose of two 2 Gm. wafers daily.

Occasionally, various adjunct substances are combined with CMC. In one such preparation, "Zymelose" tablets, (Otis E. Glidden & Co., Inc., Waukesha, Wis.), the cellulose compound is mixed with brewer's yeast, a source of vitamin B complex factors.

Methyl cellulose has also found a number of uses in pharmaceutical manufacture,[23] but its growth as a leading laxative material is really outstanding. The Chilcott Laboratories (Morris Plains, N. J.), who claim to have pioneered the use of this material as a laxative, recently stated that more than 40 preparations containing methyl cellulose had reached the market. These, of course, were in competition with "Cellothyl," their own brand of methylcellulose in tablet and granular form. Also highly indicative is the report by a leading producer of methyl cellulose (The Dow Chemical Co., Midland, Mich.) that the demand for this raw material for use in the manufacture of bulk laxatives had increased by 150 per cent in one year.

As already indicated, methylcellulose has many characteristics in common with CMC, but it also has certain definite properties of its own. As pointed out in the *J.A.M.A.*,[18] numerous experiments in feeding man and animals with methylcellulose have shown that it is excreted practically quantitatively with the stool without any untoward effects, even after prolonged administration. It forms a thin colloidal solution in the stomach and remains in this state until it reaches the colon, where a smooth, demulcent gel is produced.[12] Using vitamin K as an indicator, one worker[26] has shown that the ingestion of methylcellulose does not interfere with the absorption of the fat-soluble vitamins.

Tainter,[27] who is generally credited with having been the first to use methylcellulose as a colloid laxative, found that the administration of only 5 Gm. twice daily produced stools with increased water content and bulk, semisoft consistency and easy passage.

Other clinical tests have added to weight of evidence regarding the value of methylcellulose as a laxative. Schweig,[10] for example, found that methylcellulose was

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effective for the relief of chronic or acute constipation in the majority of his cases. Its use resulted in the passage of a normal, soft, bulky stool without griping, cramping or tenesmus in most cases. Its prolonged use, for up to eight months, did not produce evidence of toxicity or systemic changes. In the cases studied by Marks,[22] functional constipation was successfully treated with methylcellulose and psychotherapy. It was found possible to wean patients away from their use of harsh cathartics and replace them with the colloid laxative.

More recently, Musick[26] reported that methylcellulose is beneficial in the control of spastic or atonic constipation in 80 per cent of 102 cases. Noting that allergic reactions did not develop in any patient in the series, this clinician remarks that the only contraindication to the use of methylcellulose is in conditions where intestinal obstruction is present or threatened. The compound also proved to be a valuable adjunct in the therapy of mucous colitis, diverticulosis, chronic diarrhea, diarrhea alternating with constipation and various other conditions.

Of related interest is Bargen's[12] finding that methylcellulose tablets were of value in a number of patients with the syndrome of irritable bowel associated with diarrhea. In addition many patients with irritable bowel associated with constipation obtained relief of symptoms when given methylcellulose.

As noted in a report on methylcellulose products, published by the Council on Pharmacy and Chemistry,[28] this material produces a gel which increases the bulk and blandness of the stool. In the course of a few days, the patient may be able to resume more normal bowel habits. The drug is customarily continued for weeks or months, often at reduced dosage. For adults, the dose is 1 to 1.5 Gm. of methylcellulose in the form of tablets or granules, with water, two to four times daily. Later, a dose of 1.5 Gm. once or twice daily may be sufficient. The granules are particularly well suited for infants and children, 0.5 Gm. being sprinkled on food or stirred into water, two or three times daily.

As a laxative, methylcellulose is usually provided as tablets or granules but, as in the case of Lilly's "Cologel," is also supplied in liquid form. A gel product, called "Turicum (Whittier Laboratories, Chicago) also contains a less-than-laxative dose of magnesium hydroxide to assure the presence of adequate water.

As a matter of fact, several preparations containing combinations of laxative methylcellulose and various therapeutic adjuvants are being marketed.[29] One such product,[30] available as "Prulose Complex" (Harrower Laboratory, Inc., Jersey City, N. J.) consists of dehydrated prune juice concentrate, fortified with an isatin derivative, combined with methylcellulose to produce "activated" moist bulk. Another called "Choducell" (Maltbie Laboratories, Inc., Newark, N. J.) consists of methylcellulose plus cholic acid to promote and maintain intestinal motility.

Others contain more physiologic components, such

as the B vitamins to help maintain the tone of the intestinal musculature. Merely to cite an example, it may be noted that "Zyocal" tablets (Reed & Carnrick, Jersey City, N. J.) contain a combination of methylcellulose and thiamine. Vitamin B is also present in "Plancello" tablets (American Ferment Co., Inc., New York). This product is unusual in that the main ingredients are a mixture of synthetic and vegetable bulk producing colloids; namely, methylcellulose and a purified psyllium.

Of course, the vegetable colloid laxatives still maintain a considerable market, but they are meeting strong competition from the more uniform and generally superior synthetic cellulose derivatives. Manufacturers of the natural products are not giving up, however, as is evident in a number of aggressive advertising campaigns in both the ethical and lay press, and other media.

Information on the usefulness of and standards for laxative mineral oil is provided in Meyer's[31] recently published text. Discussions concerning the merits or demerits of mineral oil continue,[32,33] but the material finds advantageous use when a softening and lubricating effect is desired, especially where it is necessary to avoid straining.[6,14,15,34] As is well known, one of the chief objections to the use of mineral oil has been based on the view that it interferes with the absorption of certain nutrients, especially carotene and vitamin A.

However, as pointed out by Cutting,[20] when mineral oil is taken upon retiring for the night, as a temporary measure, the hazards of vitamin A and related deficiences are probably safely minimized. Pertinent in this connection are studies[35] on human subjects in which no evidence was obtained that 30 cc. of mineral oil taken daily at bedtime for as long as 51 days with a diet containing 4,000 International Units of potential vitamin A, causes an abnormal decrease in the plasma level of vitamin A. In passing, it may be noted[7] that the administration of vitamin A to persons taking mineral oil regularly has been suggested as a means of avoiding deficiency.

Recent studies are also indicative with respect to the effect of mineral oil on caloric food values. In animal investigations, Paul and Paul[36] found that when the oil is given in quantities comparable to those prescribed for the relief of constipation in humans no caloric loss of food is experienced.

Mineral oil is sometimes used as an adjunct with other agents. Thus, in the correction of simple constipation, it has been suggested[9] that a hydrophylic colloid preparation be taken on arising each morning, and mineral oil be taken before retiring. Of course, it has long been common practice to use laxative emulsions made by combining mineral oil with substances like agar, acacia or Irish moss. In some cases[37] small proportions of irritant cathartics, like cascara or phenolphthalein, are included.

Although the irritant laxatives are not so much used as formerly, they are helpful therapeutic substances and some preparations remain quite popular. While hardly

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given the kind of attention provided for the synthetic colloid laxatives, the irritant cathartics have received some recent study. Rosenthal and his associates,[38] for example, have described an improved solubilized phenolphthalein laxative of low toxicity. In England, Fairbairn and Michaels[39,40] have reported the results of their extensive studies on senna pod and its preparations. The same group[41] has also made a study of the active principles of rhubarb.

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Vitamin and Mineral Claims

(*Continued from page 583*)

5. Deficiencies of vitamins and/or minerals in the diet may show itself as one of the common or not so common deficiency diseases, including those most responsible for death in our 40's and 50's, whereas we should live in good health and vigor, and with full possession of our faculties, to the age of 90 or 100.

6. Diagnosis of disease is not necessary because whatever the trouble or its medical name a vitamin and mineral food supplement will cause it to disappear.

7. The use of a vitamin and mineral food supplement will bring about a condition of health.

8. Every illness is the result of chemical imbalance and health is the result of chemical balance, and a vitamin and mineral food suplement will bring the body into chemical balance.

9. The terms "health nuisances", "chemical imbalance", "not-health", "poor nutrition", "malnutrition", "deficiency disease", "dietary deficiency", "deficiency ailment", or "dietary deficiency ailment" have the same meaning as every and all ailments, illnesses or sicknesses.

10. The accessory food factors necessary to good health are called nutrilites in the text books of the biochemists; the term "nutrilites" means vitamins, chlorophyll, bios, inositol and many others.

11. All vitamins and other accessory food factors originate in plant material.

12. A food supplement which is capable of protection against the ravages and pain of deficiency diseases must contain all the vitamins, including those which cannot be bought in the drug store, together with the nutrilites and minerals so often lacking in our diet.

13. A significant proportion of military service rejections during World Wars I and II were due to malnutrition or vitamin and/or mineral deficiencies in the diet.

14. Distributors should use the process of elimination in selling a vitamin and mineral food supplement, through which it is reasoned that all diseases and incapacities except those due to germ invasions and accidents, are attributed to faulty nutrition.

The allowable claims for Nutrilite Food Supplements are limited to the following:

1. These articles, when taken as directed, will supply to the user's diet the vitamins and minerals stated on the labels in the amounts and proportions of the minimum daily requirements stated on their labels.

2. The need in human nutrition has been established for the following vitamins and minerals contained in Nutrilite Food Supplement:

Vitamin A	Calcium
Vitamin D	Phosphorus
Vitamin B-1 (Thiamin)	Iodine
Vitamin B-2 (Riboflavin)	Copper
Vitamin C (Ascorbic Acid)	Iron
Vitamin K	
Vitamin B-6	
Niacinamide	

but the need in human nutrition has not been established for the following vitamins and minerals contained in Nutrilite Food Supplemnt:

Vitamin E	Manganese
Inositol	Zinc
Folic Acid	Cobalt
Rutin	Nickel
Para-aminobenzoic Acid	Fluorine
Pantothenic Acid	
Vitamin B-12	
Biotin	

3. That a prolonged deficiency in the intake of any vitamin or mineral for which the need in human nutrition has been established (except Vitamin D, which may also be derived from exposure to sunlight) produces pathological conditions known as vitamin or mineral deficiency diseases, whereas the daily intake of a certain minimum quantity of such substances prevents the onset of such conditions.

4. That a "clinical deficiency disease" is one which is capable of being diagnosed by qualified physicians from generally recognized symptoms.

5. That a "sub-clinical deficiency condition" is one,

the symptoms of which are not sufficiently definite or apparent, as to be capable of diagnosis.

6. That "sub-clinical deficiency conditions" do exist in the United States.

7. All of the B-Complex vitamins for which the need in human nutrition has been established, viz: vitamin B_1 (thiamine), vitamin B_2 (riboflavin), niacin, and vitamin B_6 (pyridoxine), are contained in Nutrilite.

8. If any representations are made to sell the need for Nutrilite Food Supplement, they shall not relate to the vitamins and minerals for which the need in human nutrition has not been established, other than statements which conform to all provisions of the Food, Drug and Cosmetic Act and are based upon reliable scientific evidence of the value of these substances.

9. If any representations are made to sell the need for food supplementation with Nutrilite Food Supplement, such representation shall be that supplementation may be needed only if the user's diet is deficient in one or more of the vitamin and mineral nutrients for which the need in human nutrition has been established.

10. If the non-specific symptoms specified in the following paragraphs are mentioned, it shall be explained that if any such symptom persists it may be a danger signal for serious disease having no relationship to a vitamin or mineral deficiency.

11. If clinical vitamin and mineral deficiency diseases (xerophthalmia, rickets, osteoporosis, beriberi, ariboflavinosis, scurvy, or pellagra) are discussed, it shall be explained such diseases are rare in the United States.

12. If a claim is made that death may result to human beings from a vitamin and/or mineral deficiency, there shall be associated with it a statement that this occurs only after prolonged and severe deficiencies of the vitamins and minerals needed in human nutrition and that such deaths are rare in the United States.

13. If a claim is made that a symptom may be due to a sub-clinical vitamin or mineral deficiency, there shall be associated with the claim a qualification that Nutrilite Food Supplement would be of benefit only if the symptom resulted from a deficiency of one or more of the vitamins or minerals contained in Nutrilite Food Supplement.

14. The vitamins and minerals for which the need in human nutrition has been established are needed in certain minimum daily amounts for the proper growth and vigor of children.

15. If a claim is made that a deficiency of vitamin A may cause nutritional night blindness, or lowered resistance to infection of the mucous membranes of the eye or other organs, it shall be explained (1) that these symptoms could occur only when the daily intake of vitamin A has been less than the minimum daily requirement over a prolonged period, and (2) that these are non-specific symptoms in that they may be caused by any of a great number of conditions or may have functional causes; and (3) that such non-specific symptoms do not of themselves prove a nutritional deficiency.

16. If the claim is made that persons suffering from chronic diarrhea require greater amounts of Vitamin A,

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it shall be explained that this is due to the evacuation of the vitamin before it can be absorbed by the body.

17. If any claim is made to the effect that a deficiency of vitamin B_1 (thiamine), vitamin B_2 (riboflavin), and/or niacin may be the cause of nervousness, loss of appetite, neuritis, loss of muscle tone, digestive upsets, diarrhea, vague aches and pains, fatigue, irritability, headache, dizziness, dryness of the hair or skin, mental depression, insomnia, indigestion, loss of weight, constipation, weakness, reddening of the lips, or sores about the angles of the mouth, swelling and redness of the tongue, or inflammation of the mouth, it shall be explained (1) that these symptoms could occur only when the daily intake of vitamin B_1, vitamin B_2, and niacin is less than the minimum daily requirement over a prolonged period; (2) that these are non-specific symptoms in that they may be caused by any of a great number of conditions or may have functional causes; and (3) that such non-specific symptoms do not of themselves prove a nutritional deficiency.

18. Vitamin B_1 (thiamine) tends in some cases to relieve the neuritis of alcoholism and the neuritis of pregnancy.

19. If it is claimed that a deficiency of vitamin C leads to dental caries, anemia, defective teeth and gums, sponginess of the gums, soreness and bleeding of the gums, pyorrhea, some gum infections, loss of appetite, and local hemorrhages of the mucous membranes of the nose, mouth, gums and about the face, it shall be explained (1) that these symptoms could occur only when the daily intake of vitamin C is less than the minimum daily requirement over a prolonged period, (2) that these conditions, while they may be concomitant signs of a vitamin C deficiency, do not of themselves prove a vitamin C deficiency, and (3) that these symptoms are non-specific and may be caused by any of a great number of conditions or may have functional causes.

20. It may be claimed that a deficiency of vitamin D (whether dietary or not) or a deficiency of calcium in the human diet may produce rickets in infants or osteoporosis in adults; that vitamin D aids in the utilization of calcium and phosphorus, and is effective when adequate amounts of these minerals are present in the diet. It may be claimed that vitamin D promotes the utilization of calcium and phosphorus in the human body; that a deficiency of vitamin D (less than 400 units per day) or calcium, (less than 750 milligrams per day) over a prolonged period may cause poor bone and tooth development in the growing child; and that during pregnancy and lactation there is an increased need for calcium, phosphorus, and iron. It may be claimed that an adequate daily supply of vitamin D (whether obtained from the diet, from dietary supplementation, or from exposure of the body to sunlight) may be useful in preventing or arresting dental caries in children when calcium and phosphorus are liberally supplied and the diet is adequate with respect to other nutrients.

21. It may be claimed that calcium is one of the essential factors in the proper coagulation of the blood; and that in some cases the administration of calcium

to pregnant women will relieve muscular soreness, muscular spasms, muscular numbness, tingling of the muscles.

22. That where whole wheat bread forms an important part of the diet, the need for calcium is increased.

23. It may be claimed that a deficiency of iron in the diet may cause iron deficiency anemia and that an adequate supply of iron is one of the essential factors in blood building. If it is claimed that a deficiency of iron in the diet may cause lack of energy or palpitation of the heart, it shall be explained (1) that these symptoms could occur only when the daily intake of iron is less than the minimum daily requirement over a prolonged period; (2) that these symptoms do not of themselves prove an iron deficiency; and (3) that these symptoms are non-specific and may be caused by any of a great number of conditions or may have functional causes.

24. It may be claimed that a deficiency of iodine in the human diet will cause simple goiter.

25. It may be claimed that a deficiency of vitamin K in the human body leads to a tendency to excessive bleeding from minor wounds.

26. That the need for vitamin B_6 (pyridoxine) in human nutrition was established during the year 1950.

27. That a deficiency of copper does not produce any known clinical disease, but copper is necessary for the utilization of iron in the human system.

28. Alfalfa, parsley, and watercress in the Nutrilite Base contribute small amounts of some of the vitamins and minerals for which the need in human nutrition has been established.

29. It may be claimed that diets may be lacking in the vitamins and minerals for which the need in human nutrition has been established, by reason of poor dietary habits, the improper selection of foods, unbalanced menus and the loss of a portion of the water-soluble vitamins through excessive cooking, storage and processing.

30. It may be claimed that many physicians who practice obstetrics supplement the diets of expectant mothers with vitamins and minerals known to be needed in human nutrition.

31. That the specifications of the foregoing allowable claims shall not preclude the making of other claims or representations which conform to all the provisions of the Federal Food, Drug and Cosmetic Act including representations based upon generally accepted scientific facts in the field of nutrition; nor shall the foregoing specifications preclude the making of statements or representations which are supported by reliable scientific opinion, although not supported by the consensus of scientific opinion, provided the statements or representations are qualified by an explanation that a difference of reliable scientific opinion respecting the same does exist; and in the event of conflict between the provisions of this subparagraph 31 and any other provision of this decree the provisions of this subparagraph 31 shall prevail.

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must state and enumerate all the purposes and conditions for which the article is intended (by the person who introduced it to be delivered for introduction into interstate commerce) when introduced into interstate commerce to be used.

It is further ordered that all engaged in the distribution of the products are perpetually enjoined from doing any of the following acts, whether oral, written or otherwise with respect to the products:

1. The use, in the sale of Nutrilite Food Supplement, of any of the written, printed or graphic matter enumerated above, or of any other written, printed, or graphic matter substantially to the same effect, including but not limited to the following, none of which was shipped in interstate commerce by defendants herein:

"Soil, A Foundation of Health" by Arnold P. Yerkes, International Harvester Co. (Chicago, 1946); "Cancer, a Nutritional Deficiency" by J. R. Davidson, reprinted from *Question Mark* (February, 1943); "—for Heart Disease: Vitamin E" by J. D. Ratcliff, reprinted from *Coronet* (October, 1948); "The Prevention of Recurrence in Peptic Ulcer" by D. T. Quigley, Lee Foundation for Nutritional Research; "The Need for Vitamins" by L. Stambovsky, Lee Foundation for Nutritional Research; "Talking about Food" by George Tyner, reprinted from *Journal of the American Academy of Applied Nutrition* (Autumn, 1947); "Why We Need Vitamin E" by August Pacini; "You Can't Build a Live Body with Dead Food" and "Why Should You Use Nutrilite"; "How to Get Well and Stay Well"—General Church Edition; or any written, printed, or graphic matter not expressly authorized in writing by defendant Mytinger & Casselberry, Inc.

2. The use, in the sale of Nutrilite Food Supplement, of any written, printed, or graphic matter which states, represents or implies that Nutrilite Food Supplement will be effective as a preventive, adequate treatment, or cure of any disease, condition, or symptom listed above, or which includes any of the representations prohibited above or any representation substantially to the same effect as those prohibited, or any other representation that is not in conformity with the allowable claims listed above.

3. Representing that Nutrilite Food Supplement is useful in the prevention, treatment, or cure of any disease, condition, or symptom that is not stated and/or enumerated in the labeling thereof.

It is also ordered that any statement, representation, or implication contained in a testimonial, whether upon any written, printed, or graphic matter (including wire or tape recordings) or made orally, may be made if allowed under the claims authorized . . . and shall be regarded as if made directly by the person using the testimonial or causing it to be used.

Mytinger & Casselberry are required to obtain from their distributors all graphic matter which is banned, and shall direct all distributors to discontinue the use of all matter not expressly authorized in writing.

The following practices are prohibited:

1. Authorizing a beginning distributor to undertake

sales prior to his completion of initial training and his approval by Mytinger & Casselberry, Inc.

2. Authorizing persons to distribute Nutrilite, or to sponsor distributors of Nutrilite, before they have been instructed as to the allowable and prohibited claims of this decree.

3. Making any representation as to the qualifications and professional background of any person associated with Nutrilite Products, Inc., or Mytinger & Casselberry, Inc., which is not expressly authorized in writing by Mytinger & Casselberry, Inc., and Nutrilite Products, Inc.

Mytinger & Casselberry are ordered to call this decree to the attention of every present distributor who sells Nutrilite Food Supplements and require each such distributor to sign a written statement that he has read the decree.

It is also ordered that all written, printed, and graphic matter used in the future in the merchandising of Nutrilite Food Supplement may at defendants' option first be submitted to the United States Food and Drug Administration for inspection and comment which shall be made within a reasonable time, and in the event the defendants disagree with the opinion of the Food and Drug Administration or upon the failure of the Food and Drug Administration to inspect and comment within a reasonable time respecting such labeling, or without submitting such written, printed, or graphic matter to said Administration, they may seek modification of this decree to authorize its use before it is distributed to agents or distributors.

It is also ordered that nothing in this decree shall be construed as to prevent defendants from doing anything which is authorized under or by the Federal Food, Drug and Cosmetic Act, as amended, or any other provision of law, nor shall this decree deprive said defendants of the immunities conferred by said Act as now in force or as hereafter amended, and in the event of conflict between this paragraph and any other provision of this decree, the provisions of this paragraph shall prevail.

It is further decreed that in applying or enforcing the provisions of this decree, any act done or any statement or representation made by any distributor of Nutrilite Food Supplement, which act, statement, or representation was neither done nor made, nor caused to be done or made, by the defendants Mytinger & Casselberry, Inc., or Nutrilite Products, Inc., their officers, employees, or persons acting under authority from them, shall be deemed and regarded as solely the act, statement, or representation of the distributor.

It is decreed that jurisdiction of this Court is retained for the purpose of enabling any of the parties to this judgment to apply at any time for such further orders and directions as may be necessary or appropriate for the construction or carrying out of this judgment or for modification of any of the provisions thereof and for the purpose of enforcing compliance therewith and the punishment of violations thereof.

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